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ABSTRACT

This special issue of the journal Exceptional Children has the theme "Rural Special Education." Nine articles deal with this theme as follows: (1) "The State of the Art of Rural Special Education" (by D. Helge), looks at recent improvements, remaining challenges, and current functioning; policy recommendations are offered for national and state policy makers; (2) "Generic Problems or Solutions in Rural Special Education" (by L. Marrs) suggests that though certain problems are universal in rural areas there is no agreement regarding generalizable solutions which will work in all rural areas; (3) "Regional Rural Special Education Programs--A Case Study of Problems, Practices, and Positive Steps," (by K. Kirmer et al), uses the Central Kansas Cooperative in Education as an example of how central beliefs, early structuring decisions, and operating procedures have aided in dealing with the rural regional special education delivery problems; (4) "Models for Serving Rural Children with Low-Incidence Handicapping Conditions" (by D. Helge) stresses that there is no single appropriate rural service delivery model and delineates factors that must be considered by the rural service delivery model planner; (5) "Providing for Rural Gifted Children within an Assortment of Services Model" (by G. Gear) notes the problems of programming for gifted students when numbers are low and stresses the need for staff to innovate and use existing community resources; (6) "A Band Wagon without Music--Preparing Rural Special Educators" (by L. Marrs) notes the irrelevance of many traditional special educator preparation programs and identifies competencies and curriculum elements which should be in preservice programs; (7) "Technological Tools for Rural Special Education" (by A. Hofmeister) notes the potential of the new technologies if rural educators prepare themselves to capitalize on the advantages and avoid the problems they offer; (8) "Technologies in Rural Special Education Problem Solvers--A Status Report and Successful Strategies" (by D. Helge) discusses applications for instructional support, direct instruction, management, and staff development. The final paper; (9) "Should a Special Educator Entertain Volunteers--Interdependence in Rural America" (L. Marrs) describes the National Rural Independent Living Network and suggests strategies for designing a volunteer program, for recruiting and training volunteers, and for linking volunteers with disabled persons. (DB)

EXCEPTIONAL CHILDREN

JANUARY 1984

Rural Special Education

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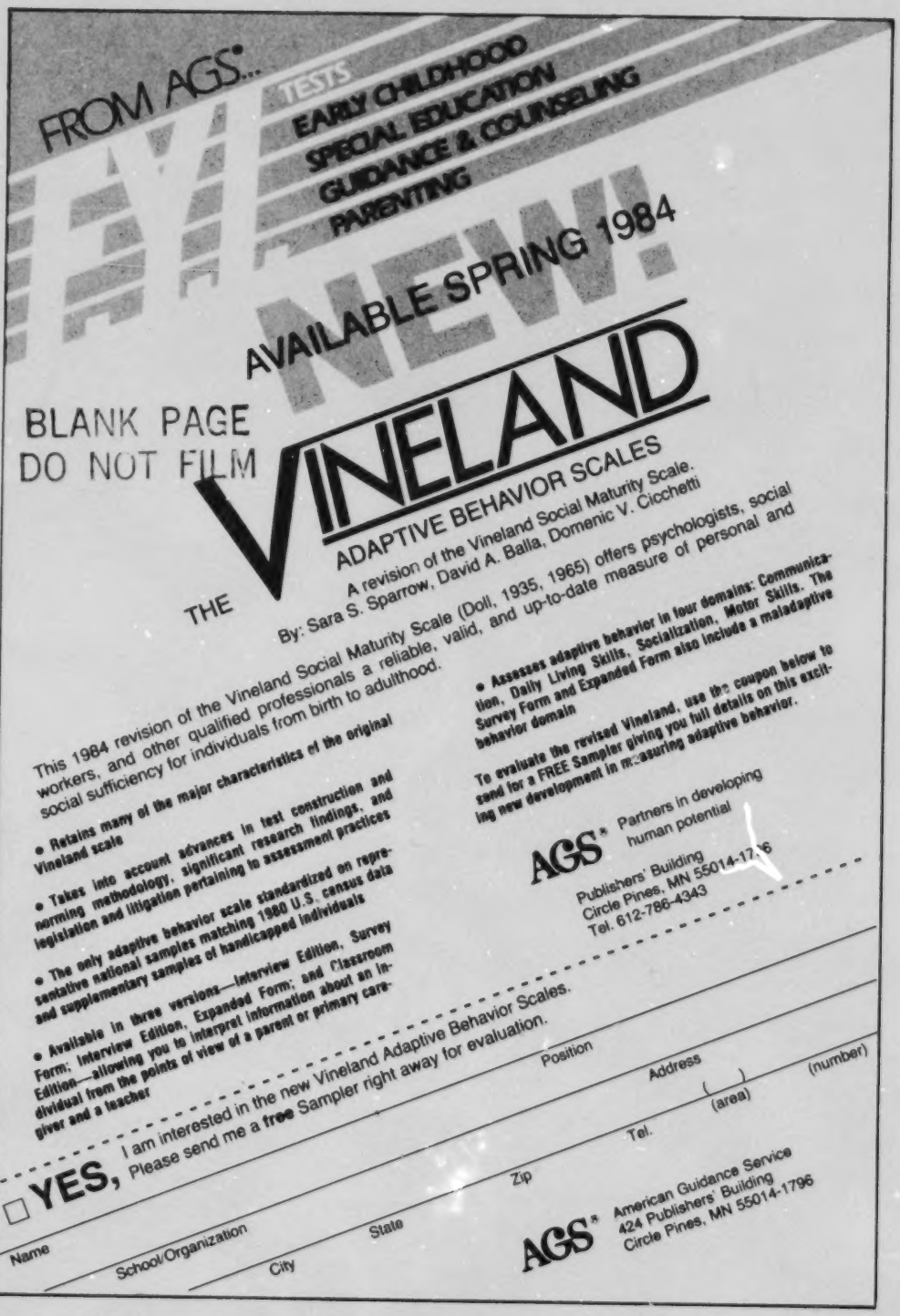
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Rural Special Education

Guest Editor: Doris Helge

Providing special education services to rural handicapped and gifted students is the focus of this special issue of *Exceptional Children*. Dr. Doris Helge, as Guest Editor, planned, developed, and also contributed to its content. Dr. Helge is Executive Director, American Council on Rural Special Education and Director, Center for Innovation and Development, College of Human Development and Learning, Murray State University, Murray, Kentucky.

This material on rural special education was developed as a product of the ERIC Clearinghouse on Handicapped and Gifted Children pursuant to contract number 400-81-0031 with the National Institute of Education, U.S. Department of Education.

Statement of Purpose

Exceptional Children, the official journal of The Council for Exceptional Children, publishes manuscripts on professional issues of concern to special educators in addition to those directly pertaining to exceptional student education. Articles appropriate for publication focus on data-based research with implications for exceptional student education; state of the art papers on trends, issues, practices, programs, and services; position statements on specific theories; articles outlining public policy and its impact on the education of handicapped and gifted individuals; and articles addressing futuristic aspects of special education. The journal also reports on official actions taken by the governing bodies of CEC.

Selection of manuscripts is made on the basis of importance of topic; accuracy and validity of contents; novelty of techniques; contribution to the professional literature; adequacy of research; implications for special education; originality; and quality of writing. Author guidelines are available at the Headquarters address.

The State of the Art of Rural Special Education

DORIS HELGE

Abstract: Rural schools comprise the majority of the nation's school systems and are extremely diverse. Although tremendous improvements in service delivery have occurred since the implementation of Public Law 94-142, considerable problems remain. This article provides an overview of improvements, remaining challenges, and current functioning. Problems with current research trends and the need for quality research regarding rural special education are addressed. Differences between rural and urban service delivery systems and the roles of rural special education collaboratives are discussed. Policy recommendations are offered for national and state policy makers.

DORIS HELGE *is Director, National Rural Research Project, Murray State University, Murray, Kentucky.*

THE UNIQUENESS OF THE RURAL SPECIAL EDUCATION CONTEXT

■ Rural schools have distinct educational environments and unique strengths and weaknesses. For example, rural areas have much higher proverty levels than nonrural areas, and rural schools serve greater percentages of handicapped children. Even though rural populations are increasing, their tax bases are not. Rural schools contribute greater percentages of their local resources for education. However, rural services cost more than similar services in urban areas because of expensive factors including transportation requirements and scarce professional resources. On the positive side, rural America still has a relatively high trust factor, close family ties, and a "sense of community." In fact, rural citizens still evidence a willingness to volunteer to help those with disabilities.

THE DIVERSITY WITHIN AMERICA'S RURAL SCHOOLS

Rural subcultures vary tremendously. They range geographically from remote islands and deserts to clustered communities, and economically from stable classic farm communities to depressed lower socioeconomic settings and high-growth "boom or bust" communities. The array of rural schools ranges from isolated schools serving as few as 1 to 10 children in a location 350 miles from the nearest school district, to schools located in small clustered towns or surrounded by other small districts.

The problems of serving a cerebral palsied child in a remote area with no physical, occupational, or speech therapist, and where 250 miles exist between that child and the next cerebral palsied child, are quite different from problems encountered in a more clustered rural area where the chief barrier to service delivery is administrative apathy. Obviously,

location has tremendous implications for proximity to resources, especially highly specialized services such as physical or occupational therapy.

Figure 1 may be helpful in conceptualizing the diversity of rural America's school systems. Each of the variables listed has individual ramifications for service delivery. For example, the administrative structure has implications for securing extra-school resources. A district that is part of a cooperative can usually obtain the services of an occupational therapist more easily than can a single isolated district.

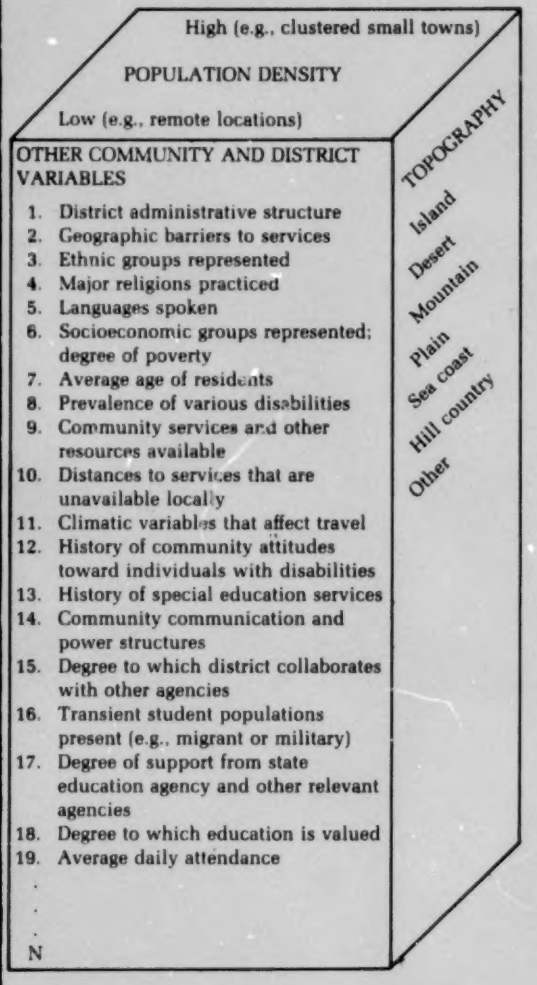
High (e.g., clustered small towns)
POPULATION DENSITY
Low (e.g., remote locations)
OTHER COMMUNITY AND DISTRICT VARIABLES
1. District administrative structure
2. Geographic barriers to services
3. Ethnic groups represented
4. Major religions practiced
5. Languages spoken
6. Socioeconomic groups represented; degree of poverty
7. Average age of residents
8. Prevalence of various disabilities
9. Community services and other resources available
10. Distances to services that are unavailable locally
11. Climatic variables that affect travel
12. History of community attitudes toward individuals with disabilities
13. History of special education services
14. Community communication and power structures
15. Degree to which district collaborates with other agencies
16. Transient student populations present (e.g., migrant or military)
17. Degree of support from state education agency and other relevant agencies
18. Degree to which education is valued
19. Average daily attendance
N
TOPOGRAPHY
Island
Desert
Mountain
Plain
Sea coast
Hill country
Other

FIGURE 1. Dimensions of the diversity of rural school systems.

Two key variables of service delivery are *population density* (Are there an adequate number of students with a given disability so that a district can "afford" to hire a specialist?) and *topography* (Does a mountain with untraversable roads at certain times of the year inhibit transportation of services to students?). Interaction of these two dimensions with that of "other community and district variables" further individualizes a district. Change of one variable in any of the three dimensions further differentiates a given community from others. Because this is an open model, the number of possible types of rural communities is infinite (. . . N). In fact, the National Rural Research Project catalogued over 300 combinations when conducting on-site visits during 1978–1982.

THE IMPACT OF INCONSISTENT DEFINITIONS

One of the most significant obstacles to thoroughly assessing the effectiveness of rural special education services has been the absence of a consistently applied definition of the term *rural* among federal agencies, educators, and professional organizations. The inadequacies of data available to compare rural and urban districts may be partially attributed to the problem of defining rural education.

Most federal agencies have no definition or requirements for gathering data on rural performance versus nonrural performance. Data on rural schools collected by the National Center for Education Statistics (NCES) have frequently been summarized with data from large school districts. Furthermore, data have been considered unimportant and completely deleted for districts which enroll under 300 students. This has occurred in spite of the fact that 25% of the operating public school districts in the United States enroll fewer than 300 students each (Williams & Warf, 1978). The NCES did not initiate processes to report data on districts with fewer than 300 students until March of 1983.

Many data-gathering bodies have defined *rural* solely by using population figures. Unfortunately, various data collection agencies and students have used different definitions in studying rural school populations, depending on the types of data being collected, the purposes for data collection, and staff and resources available.

A rural school district has commonly been defined as one having fewer than 1,000 students, although figures as high as 2,500 have frequently been used. Population-based definitions of "rural" may inadvertently include nonrural districts. For example, if the local education agency (LEA) being classified is a large county school district, it may have a larger enrollment than 1,000 or even 2,500 yet still be very rural because of the sparsity of its population. In addition, strictly defining a rural district as fewer than 1,000 or even 2,500 students may inadvertently result in the inclusion of suburban areas. One may readily ascertain some of the potential problems when special education cooperatives are being considered. This is particularly true because of the historical emphasis on consolidation of rural districts. A population-per-square-mile definition is more functional even though total geographic square miles may differ.

ONE WORKING DEFINITION OF "RURAL"

The following definition is based on a modified census definition and consideration of the tremendous diversity in rural schools and communities across the United States. This definition was used in 1978–1983 research projects funded by the U.S. Office of Special Education Programs (SEP) and conducted by the NRP. While it is only one of many definitions of "rural," it has proven functional.

> A district is considered rural when the number of inhabitants is fewer than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a Standard Metropolitan Statistical Area (SMSA), as determined by the U.S. Census Bureau, are not considered rural.

Use of this definition by a research project does not exclude larger districts from potentially benefiting from project outcomes. Rather, it attempts to ensure that research findings will be relevant for those districts that are within the parameters of the definition. For example, NRP research in 100 school districts from 1978–1981 identified effective service delivery strategies appropriate for specific types of rural subcultures. To prevent the automatic assumption that a strategy would be viable in a similar subculture just because it had been effectively used by an LEA/cooperative with parallel characteristics, districts were paired by those that were effectively implementing Public Law 94-142 and those that were not. Strategies found to be effective in an upper functioning district but which failed in another district with similar community and district variables were discarded from the core of "potentially disseminable strategies."

RURAL VS. URBAN SPECIAL EDUCATION SERVICE ENVIRONMENTS

For purposes of this discussion, the term *urban* will be defined as "an area having an incorporated city with at least 2,500 inhabitants or a city within a Standard Metropolitan Statistical Area" (National Center for Education Statistics, 1978). This definition is fairly consistently used among federal agencies.

There are at least two important caveats in comparing rural and urban communities and school systems. First, even rural communities with the same population numbers, densities, etc., vary tremendously because of the variety of community subcultures they contain. Second, because of the controversies over definitions, it is useful to think of rural and urban characteristics as being on a continuum. Issues differentiating rural and urban school systems as they attempt to serve special education populations are listed in Table 1.

THE NEED FOR QUALITY RESEARCH

Partially because of definitional problems, little data collection occurred concerning rural education or rural special education until the late 1970's. Urban service delivery models have historically been recommended and unsuccessfully applied to rural schools. Practices successful in one specific type of rural subculture have also been transported, without adaptation, to other rural subcultures and have failed.

Recent studies funded by the U.S. Office of Special Education Programs (SEP) clearly showed that rural special education service delivery strategies must be individually designed (Helge, 1981). It is also critical that research projects have a well structured definition of "rural" rather than stating, as have some recent studies, "you'll know when you're there because it will feel rural." No matter what definition is used, it is imperative to differentiate between rural and nonrural

schools. Only when there is a consistent frame of reference can one feel comfortable noting and confronting "exceptions to the rule."

The field should be wary of "studies" sampling a small population of rural schools and making broad-ranging generalizations or, worse yet, futuristic prophesies and policy recommendations. Competent researchers explain their attempts to obtain adequate samples, discuss the limitations of their studies and outline further research that is needed. It is only then that limited conclusions are offered, based on evidence to date and with no legitimate claim for generalizability of the conclusions.

Interest in rural special education is burgeoning. Numerous studies proclaim discovery of the rural model. Others are investigating districts and generalizing to cooperatives, or vice versa. Practitioners and personnel preparation programs will not benefit from studies that involve inappropriate generalizations. Although the "last word" at the federal level has yet to be spoken on the definition of "rural," and although national research with adequate sampling that clearly differentiates rural subcultures is relatively expensive, it is essential.

STATUS REPORT ON SERVICE DELIVERY

A study involving 75 school districts and cooperatives in 17 states was commissioned by the SEP to compare services to rural handicapped students before and after the implementation of P.L. 94-142 (Helge, 1980).

The sampled districts and cooperatives were selected for their geographic, cultural, and socioeconomic representativeness. State education agencies (SEA's) had been requested to select LEA's/cooperatives with widely variant performance regarding P.L. 94-142 implementation. Two-day on-site visits in each district involved interviews with persons at all levels of the organization. Follow-up telephone interviews gained additional information and detected divergent responses during "crisis" and routine periods. Consistencies and discrepancies between SEA and LEA responses were also noted.

The sampled districts and cooperatives exhibited significant improvements in programs and services offered and in the types and ages of handicapped students served. Achievements included a 92% average increase in the number of handicapped students identified and served since the passage of P.L. 94-142.

Table 2 indicates the percentage of various services before and after the implementation of P.L. 94-142. Column 3 of Table 2 indicates the percentage of change in available services before and after implementation. Percentages of change in the number of districts providing services before and after implementation ranged up to 1,525%. In a majority of the rural schools sampled, services such as physical and occupational therapy and programs for severely handicapped students were in place for the first time. Procedures for due process, parental involvement procedures, and individualized education programs (IEP's) had been established.

In spite of this progress, the sampled districts and cooperatives reported major problems implementing P.L. 94-142. These included difficulties recruiting and retaining qualified staff, resistance to change, the need for staff development, long distances between schools and services, cultural differences, geographic barriers, transportation and funding inadequacies, problems providing support services, and problems with interpreting P.L. 94-142 regulations in rural areas. These factors affected district abilities to ensure procedural safeguard requirements, and to otherwise fully implement the law.

AN UPDATE ON SERVICE DELIVERY PROBLEMS

In January, 1983, a telephone survey, funded by the U.S. Office of Special Education Programs, was conducted to gather original data and to update 1978–1982 NRP studies. A total of 200 special education administrators from 200 rural local school systems and cooperatives in all 50 states (4 from each state) were involved. The survey was designed to provide a state-of-the-art synopsis of facets of rural special education service delivery. Respondents also included representatives of the Bureau of Indian Affairs (BIA) rural schools (Helge, 1983).

Respondents were representative of various rural economies, population densities, and types of organizational structures. The study covered topics including service delivery problems and effective strategies, personnel needs, certification problems, strengths and weaknesses of rural special education person-

TABLE 1
Issues Differentiating Rural and Urban School Systems as They Serve the Handicapped

Issues	*Rural*	*Urban*
Percent of school districts	Two-thirds (67%) classified as rural	One-third (33%) classified as metropolitan
Personnel turnover	Commonly 30% to 50% among specialized personnel such as speech, physical, and occupational therapists; especially serious among itinerant personnel serving low-incidence populations	More commonly involves superintendents and special education directors (i.e., management personnel); teacher turnover less than in rural schools
Transportation	Interagency collaboration hampered by long distances High costs Climatic and geographic barriers to travel	Problems primarily associated with desegregation issues or which agency o. bureaucratic structure is to pay for transportation
Community structure	Sense of "community spirit" Personalized environment	Environment depersonalized except within inner-city pockets of distinctive ethnic groups (several of which may be incorporated into any one school system)
Geography	Problems include social and professional isolation, long distances from services, and geographic barriers	Problems posed by logistics of city (e.g., negotiating transportation transfers, particularly for wheelchairs)
Difficulties in serving specific disabilities	Low-incidence handicaps hardest to serve; integration of mildly/moderately handicapped students more acceptable than in urban schools	Adequate numbers of low-incidence handicapped children typically allow students to be clustered for services or for a specialist to be hired; urban environment frequently not attitudinally as conducive to acceptance of mainstreamed mildly/moderately handicapped students
Backlog of children for testing and placement	Results from lack of available services (specialized personnel, agency programs, funds, etc.)	Results from bureaucratic and organizational barriers
Communication	Mainly person to person	Formal systems (e.g., written memos) frequently used

Student body composition	Small numbers of handicapped students in diverse ethnic and linguistic groups pose difficulties for establishing "programs" for bilingual or multicultural students Difficulties in serving migrant handicapped students because of low numbers and few appropriate resources Qualified bilingual and multicultural personnel difficult to recruit Appropriate materials and other resources typically unavailable or inappropriate Religious minorities frequently strong subcultures	Typically has a wide variety of ethnic and racial groups Open student populations pose challenges and service delivery complexities, but comprehensive multicultural programs are feasible
Approach of relevant educational professionals	Generalists needed to perform a variety of tasks and teach a variety of ages, handicapping conditions, and subjects	Specialists needed to serve as experts on one topic area or with one age group or disability
Student problems reported by teachers	Poor motivation; lack of educational goals and relatively low values for formal education	Discipline problems prevalent
Availability of technical resources	Advanced technologies less often available, particularly for student use	Modern technologies more prevalent than in rural schools and more available for use by students
Teacher qualifications	Schools frequently forced to hire unqualified personnel via temporary certifications	Special educators more likely to have advanced degrees with an appropriate specialization
Personnel recruitment and retention problems	More serious for rural than urban schools; related to low salary levels, social and professional isolation, lack of career ladders, long distances to travel, and conservatism of rural communities	Problems regarding some types of teachers, but less than in rural areas; school discipline, crime, violence, pollution, impact retention, etc.
Causes of funding and policy inequities	Rural "advocates" fewer in number and therefore less vocal; sparse populations facilitate policies ignoring rural problems	Separate but unequal school systems created by government policies and funding mechanisms facilitating areas with inadequate tax bases; existence of inner-city minority groups with little political clout facilitates unequal treatment for urban handicapped children

Source: Helge, 1983

TABLE 2
Percentage of Changes in Availability of Services Before and After the Implementation of P.L. 94-142 in Rural School Systems (n = 75 districts and cooperatives)

Service Category	*Before P.L. 94-142*	*After P.L. 94-142*	*Percent Change*
No services for any handicapped students	5%	0%	−100*
No services for severely handicapped students	9%	1%	− 88*
No services for 16 to 21-year-old handicapped students	27%	1%	− 96*
No health services	19%	0%	−100
Services for 3 to 4-year-olds	7%	63%	+743*
Services for 19 to 20-year-olds	36%	72%	+100*
Services for multihandicapped	0%	47%	**
Services for physically handicapped	7%	47%	+571*
Services for visually handicapped	17%	57%	+235*
Services for emotionally disturbed	9%	52%	+478*
Services for hearing impaired	25%	60%	+140*
Services for learning disabled	27%	79%	+193*

*Significant at the .05 level
**Increase infinite; statistic cannot be calculated
Source: Helge, 1980

nel preparation programs, and emerging technologies related to programs for rural handicapped students. An overview of some of the more significant findings is presented in the sections that follow.

Major Problems Identified

Table 3 illustrates major problems identified by respondents when asked to state in rank order the greatest problems faced by their districts/cooperatives as they attempted to serve rural students with handicaps.

Major service delivery problems identified in this study were relatively consistent with those found in the National Comparative Study (Helge, 1980) funded by the SEP. The major noteworthy differences were increases in the percentages of respondents naming funding inadequacies (up from 56% to 74%), transportation inadequacies (up from 34% to 60%), and difficulties providing services to low-incidence handicapped populations (up from 39% to 52%).

Respondents said the following factors were primarily responsible for these significant increases: (a) fiscal inflation; (b) increased numbers of handicapped students identified and served (a 92% increase after implementation of P.L. 94-142); (c) a sufficient period of time elapsing since initiation of P.L. 94-142 to determine services needed and to experiment with provisions of the IEP; and (d) tremendous revenue shortfalls and other funding problems experienced by numerous states and impoverished rural communities.

Personnel Needs

Respondents were asked, "What special education and supportive positions are most needed in your district but are nonexistent, unfilled, or not funded (cut back because funding for a position was rescinded)?" Table 4 indicates responses to this question.

Respondents generally reported that low-incidence/itinerant positions (including physical, occupational, and speech therapists) were most often needed but did not exist. Personnel recruitment and retention problems (noted to be a major problem by 66% and 64%, respectively, of those sampled) were directly related to the descriptions of special education and support personnel needed. Only 17% of the districts/cooperatives surveyed related that they had an adequate number of special educa-

TABLE 3
Major Problems in Serving Rural Handicapped Students
n = 200

Problem	Percent
Funding inadequacies	74
Difficulties recruiting qualified staff	66
Difficulties retaining qualified staff	64
Transportation inadequacies	60
Providing services to low-incidence handicapped populations	52
Need for staff development	50
Resistance to change	46
Providing support services	44
Negative attitudes of school personnel and communities toward handicapped students	42
Long distances between schools and services	42
Involving parents	40
Professional isolation	40
Climatic problems and marginal roads	32
Problems of geographic terrain	32
Cultural differences	32
Difficulties involved in serving transient populations	28
Post-high school services	26
Inadequate facilities	20
Foster care inadequacies	18
Planning difficulties because of "boom or bust" economies and populations	16
Interagency collaboration	8
Housing inadequacies	8

tion personnel. An increasing concern of the SEP has been that standards for hiring rural personnel have been lower than standards in nonrural areas. The data from this study corroborated this concern (e.g., 92% of the respondents reported that emergency certification was "available and frequently used"). Respondents also stated that temporarily certified personnel were not well qualified for their positions.

Effects of Teacher Certification Guidelines

The majority of the respondents (59%) related that certification guidelines were too specialized for rural programs. For example, most states mandate that one or more areas of specialization occur in training. The LEA respondents felt that such a requirement was inappropriate for service in rural areas, where working with a variety of low-incidence handicapping conditions is typically required. In fact, numerous states have initiated certification requirements responsive to rural service delivery problems, and many are investigating how they may be more responsive to rural service problems.

Inadequacies of Preservice Training

Teacher training institutions generally do not consider special rural needs and circumstances when designing training programs. The vast majority (97%) of respondents stated that they had not been trained specifically for work with rural handicapped students. Only 10% described their preservice training as adequate for their work in rural communities. Respondents felt particularly strongly about the need for generalizable noncategorical skills because most rural special educators work with a variety of handicapping conditions and have few specialists available.

Anticipated Problems

Inadequate funding and problems with recruitment and retention of qualified personnel were as prominent in future projections (a concern of 80% of the respondents) as they were in currently identified problems. Respondents anticipated that future political actions would prove inequitable for rural special education and were anxious about the effects of emerging technologies. For example, interviewees were concerned about ethical issues of technology, lack of money to secure equipment, and the speed of technological developments. They also expressed concern regarding the inequitable distribution of advanced technologies.

STATUS REPORT ON RURAL SPECIAL EDUCATION COLLABORATIVES

Collaborative structures facilitating the delivery of special education services have existed

TABLE 4

Special Education and Support Positions Needed But Nonexistent, Unfilled, or Not Funded

$n = 200$

(Each entry reports the percentages of the total number of respondents with a given response.)

Position	Nonexistent	Unfilled	Not Funded	Average
Social worker	10%	3%	16%	9%
Guidance counselor/ therapist	6%	0%	0%	2%
Psychologist	10%	0%	6%	5%
Vocational education teacher	3%	0%	6%	3%
Vocational rehabilitation staff	0%	0%	3%	1%
Occupational therapist	3%	10%	17%	10%
Physical therapist	6%	27%	23%	19%
Speech pathologist/language therapist	3%	23%	17%	15%
Audiologist	0%	0%	3%	1%
Hearing impaired teacher	0%	3%	0%	1%
Learning disabilities teacher	12%	10%	10%	11%
Teacher of the emotionally disturbed	3%	6%	6%	5%
Resource room teacher	0%	6%	0%	2%
Teacher of the gifted	0%	3%	6%	3%
Nurse	3%	0%	3%	1%
Low-incidence/itinerant personnel	3%	17%	20%	13%
Teacher of trainable mentally retarded	3%	0%	3%	2%
Paraprofessionals	0%	0%	3%	1%
Preschool teachers	0%	0%	6%	2%
Adaptive P.E. teacher	0%	0%	3%	1%
Personnel adequate	NA	NA	NA	17%

for decades. These include:

1. State-mandated special district systems and education service agencies.
2. Cooperatives formed by local district initiation.
3. Regional or decentralized state education agency systems providing no direct services.
4. Other interorganizational structures, including district contracts with private or community agencies; cooperative:cooperative or cooperative:LEA agreements; interstate collaboratives; and other unique arrangements.

Most of these structures were not specifically designed so that students with disabilities could be served, although some (such as the education service districts in Texas) were designed with rural and regional service needs in mind.

Because of the requirement in the federal regulations for P.L. 94-142 that districts request a minimum of $7,500 in flow-through monies from SEA's, special education cooperatives have mushroomed since 1975. Those

structures vary tremendously in governance systems and in geographic scope, but most were designed to ameliorate the difficulties of providing a continuum of services in rural schools. Of particular concern were problems serving students with low-incidence disabilities.

Collaboratives of all types offer opportunities for cost savings via shared staff, programs, staff development, and other resources. Collaboratives offer local rural districts the advantage of joining together for services while maintaining the benefits of small schools. These benefits include a great deal of autonomy in how services are provided.

Collaboratives also frequently reduce the degree of resistance to change in rural districts when administrators, teachers, and members of the community meet together to discuss shared problems and when the public is appropriately involved in decision-making. To this extent, collaborative structures tend to increase accountability to students with disabilities and their families. In collaboratives where interaction with clients and communities is scarce, client accountability is decreased.

Concerns

NRP research has also identified a number of concerns about the operation of collaboratives.

1. Goal displacement occurs when an emphasis on cost efficiency becomes the overriding goal of an administrative structure, and individual child needs are placed at a lower priority level. A caveat seems to be necessary in maintaining focus on the true purposes of the collaborative.
2. Cumbersome bureaucratic layers and political structures designed to facilitate services can actually isolate students from services and unnecessarily involve service providers in political battles. The involvement of multiple governing boards (within each LEA and for the collaborative as a whole) is usually cumbersome.
3. The separate fiscal status of LEA's and the collaborative can cause instability for the local district. This is particularly true when the collaborative requires the LEA to purchase services. The types of services offered, their quality, or the program emphasis may be changed for financial reasons rather than on a needs basis.
4. Adequate consideration must be given to establishing effective relationships between the collaborative and each district in regular as well as special education matters. This includes lines of accountability of all personnel hired by the collaborative to work with some or all districts involved. For example, it is wise to discuss guidelines for dividing service time for collaborative personnel among various duties and districts at an early stage. Some collaboratives find it effective to allocate district costs on the basis of the amount of time in service delivery in that particular district. Other districts prefer that staff payments be equally split, no matter where services were delivered. Such operational decisions are best made when the structure is initiated.
5. The abilities of shared personnel to cover vast distances effectively are another concern. In addition, many special education supervisory staff hired by the collaboratives are unable to have impact on special education staff working with their districts. They either have no hiring input or no control over staff actions, as many special education personnel were deemed to be accountable to the building principal once they entered his or her building.
6. District personnel may abrogate their responsibilities by allocating all responsibility for handicapped students to the collaborative. Many collaborative staff feel a need for better education and commitment of district personnel in understanding their roles in complying with P.L. 94-142. The ultimate source of responsibility for services is frequently difficult to determine.
7. Program specialists (such as itinerant teachers) find that acceptance is often a problem. District staff frequently do not understand the specialists' role, their grueling travel schedules, and the problems of operating in less than adequate facilities reserved for the "part-time staff member." Burnout is frequent.
8. Accountability systems are frequently difficult to detect, and informal systems often differ dramatically from those of the formal organizational chart.
9. Parent involvement and communication becomes more and more difficult as services are removed further from the local school building. Situations requiring child travel

to a centralized service facility inadvertently exclude many parents from participating in the child's program.

10. Quality of services is often inconsistent across units of a collaborative because of variations in staff competency and staff development programs.
11. Hidden agendas are prolific in collaboratives because each district feels ultimately responsible to the local community. True change across a collaborative is difficult in the midst of competing local priorities.

As futuristic trends indicate more networking and interagency collaboration (Naisbitt, 1982), the field can expect the use of collaboratives for rural special education purposes to increase. Successful strategies will include: (a) decentralization of services whenever possible, real delegation of authority as well as responsibility, and an emphasis on local ownership and commitment; (b) creation of staff roles that emphasize networking to accomplish service delivery; (c) clearly established goals, policies, accountability systems, and staff job descriptions; (d) responsibility for regular as well as special education aspects of service delivery, whenever practical; (e) realistic perspectives regarding interagency collaboration and district motivations to become involved; (f) open agenda setting; (g) creation of local support for change across the collaboration so that local agendas do not conflict with those of the collaborative; and (h) allowing for divergent goals of each unit of the collaborative.

POLICY RECOMMENDATIONS

The following recommendations are offered to national policy makers who influence rural special education service delivery systems. They are based on analyses of numerous studies funded by the SEP, including those referenced above, and a comprehensive literature review. They also draw upon literature and position papers of the American Council on Rural Special Education (ACRES), including its 1983 response to the Report of the National Commission on Excellence in Education.

1. The federal government should adopt and apply a consistent definition of "rural." This would facilitate accurate and efficient data collection by federal and state agencies.
2. The federal government should mandate routine data collection at federal and state levels on the quality of rural special education. Such data collection should include information differentiating rural and nonrural funding and educational quality.
3. National and state policy makers should assess data on differences in the quality of rural and nonrural special education services and in funding equitability. Comprehensive plans should be developed to ameliorate identified problems.
4. The federal government should enhance its commitment to Public Law 94-142 and its implementation in rural America. Adequate funding levels should be initiated and maintained for serving rural students with disabilities.
5. National policy makers should recognize the diversity of rural subcultures. This should culminate in the recognition that the implementation of P.L. 94-142 (i.e., enactment of the federal regulations) will be different in rural than in nonrural areas and that each rural subculture will require unique problem-solving strategies.
6. Federal and state governments should provide support for innovative teacher training programs and address critical personnel shortages in rural special education. Federal support should encourage collaborative efforts between state education agencies and universities designed to determine positions and types of personnel needed, and devise appropriate personnel preparation programs. Universities should be encouraged to advise students of career opportunities in areas of critical personnel shortages.
7. National and state policy makers should investigate the development of career ladders designed to recruit and retain quality rural special education personnel. Career ladders should become part of national systems designed to link available positions and applicants.
8. National and state policy makers should address certification issues and the problems they pose for rural school systems. They should support assessments of when generic vs. specialized personnel are most effective and analyze appropriate uses of paraprofessionals.
9. Federal and state governments should directly and indirectly support comprehen-

sive inservice training programs addressing critical needs of rural service delivery programs. This support should be designed to assist staff development in inadequately financed rural school systems with extraordinarily high teacher turnover rates.

10. National and state policy makers should support investigation and information dissemination concerning alternate service delivery systems that are effective and, when possible, cost-efficient.
11. National and state policy makers should continuously support the investigation of technological alternatives for instruction and instructional support, management, and staff development applications for rural special education. Strategies emphasizing cost savings and alternatives for securing services should be accentuated.
12. National and state policy makers should develop programs to motivate corporate gifts to rural schools of technological hardware, software, and inservice training.

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Regional Rural Special Education Programs

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Abstract: This article delineates environmentally embedded problems inherent in establishing and operating rural regional special education delivery systems, and discusses their interrelated effects. Using the example of the Central Kansas Cooperative in Education, it points out how central beliefs, early structuring decisions, and operating procedures have aided in dealing with such concerns. Also provided are plans of action to deal with more persistent issues. A list of critical considerations in developing an effective rural regional delivery system is provided.

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■ The typical rural system faces a number of hurdles to effective service delivery. The rural program is a system superimposed on separate districts, each with its own stated and unstated priorities, operating procedures, and informal social system and norms. To be accepted by the districts it services, the delivery system must secure consensus across districts. This is essential because it must either pursue specific kinds of goals and processes across all districts, or operate independent programs with each. Achieving that consensus on common programs is not easy. When a regional system is begun, the independence of rural districts frequently forces agreements on goals and processes that are somewhat ambiguous in nature. While politically necessary, this creates problems by allowing different agendas to create conflict.

PROBLEMS INHERENT IN RURAL REGIONAL DELIVERY SYSTEMS

Overall, the mission of the special education system is that of most effective service for exceptional children in the least restrictive environment. Yet the geographic and social isolation of rural areas frequently makes the local school and its leadership more responsive to local norms and demands than to delivery system goals. Included among those norms may be a tendency of some teachers to use special education programs as a safety valve to alleviate teacher frustrations with students experiencing learning problems. When program ambiguity already exists, it may well be used to circumvent the delivery system mission.

The geographic size of the rural regional system creates other problems. The frequency and quality of communication among dispersed special education staff is a continuing problem, and access to instructional, diagnostic, and informational materials also becomes

an issue. Support for field personnel is difficult; either the area stretches coordinators or supervisors thinly, and/or fiscal conservatism makes such positions scarce.

Time poses difficulties in terms of time consumed in travel, timeliness of information and resource flow, and meshing of schedules both for delivery of instruction and for systemwide professional activities. Sparsity of staff combines with scheduling problems and lack of access to resource people to make organized staff development activities difficult.

At the same time, the perceived disadvantages of living in relative cultural, recreational, and educational isolation in a rural area make it difficult to attract and hold qualified personnel. In order to staff programs, new teachers and marginal candidates must frequently be hired—people who need considerable technical and affective support in order to become effective special educators. Yet the conditions under which they work are stressful: relative isolation from other special educators, limited communication and staff development opportunities, a high degree of role and goal ambiguity, problems of acceptance in the local school social system, and being in the middle of school and special education program disagreements. These conditions and stressors result in personnel retention problems and in "burnout" among those that remain, reducing both staff and program effectiveness.

If not addressed, all these limiting conditions interweave to make effective program planning, implementation, and evaluation difficult. It is not surprising that many rural systems seem reactive captives to events and slow in improving child service.

THE CENTRAL KANSAS COOPERATIVE

Each educational program is a product of many things, not the least of which are the *zeitgeist* and *volkgeist* (spirit of the times and culture) in which it arises. The Central Kansas Cooperative began during a period of rapid change in Kansas public education. School district consolidation had been accomplished via legislation. However, the enrollment of many districts was still too small to provide a comprehensive and diversified program of services for handicapped children. Still, the new laws provided an opportunity for districts to work cooperatively to provide those special education services, while maintaining the positive qualities of relatively small, community-based attendance centers.

Shaping Forces

Enabling legislation for special education services was enacted in Kansas in 1949. However, State Department of Education guidelines suggested minimum district enrollments to provide effective special education programs which exceeded that of most Kansas school districts. Consequently, the majority of the school-aged handicapped population in Kansas was unserved. It was also obvious that the Kansas tradition of small, community-based rural districts would not support consolidation to the point of enrollment necessary to implement independent programs in each district.

To meet service needs at a regional level which could not be provided by small districts, twelve school districts in a four-county area of central Kansas submitted a proposal in 1966–67 under Public Law 89-10, the Elementary and Secondary Education Act. Primary goals of the project were:

1. To develop an area-wide program of special educational services by providing the specialized administrative, supervisory, and resource personnel and equipment to support and encourage the growth of programs in local districts.
2. To develop an organizational framework allowing a group of relatively small school districts located in a rural area to work together to provide certain education services which they are unable to provide separately.
3. To develop a comprehensive program of inservice training to support classroom teachers and assist them in developing and improving their skills in working with children.
4. To provide a program of information and education to other adults interested in children with learning problems.
5. To develop a diagnostic and remedial center to service and support special education programs in the cooperative district.

The Cooperative was approved in July, 1967, for three years. During that operating span the superintendents and boards of education of participating districts had the opportunity to explore specific district and area-wide needs, as well as to experiment with collaborative

efforts in developing program responses. With the leadership of key superintendents and the Cooperative director, several early decisions shaped the future of the Cooperative. Among those were the following:

The project would be a genuinely cooperative effort, committed to the common good. To emphasize that philosophy and to express trust, each district was to be allocated one vote on the governing board, regardless of size. Another philosophical emphasis was the notion that: "We are the Cooperative; its programs and personnel are ours."

There would be common operating procedures throughout the Cooperative as opposed to independent district programs. While personnel would be employees of the formal sponsoring district, evaluation of staff would be completed by administrators of buildings in which the staff served, with input from the Cooperative's administration.

The principal was to function as the instructional leader of all programs—regular or special—in his or her building. All special education staff serving in the building were to be responsible to and supervised by the principal. This has served to reduce conflict between building level staff and to increase ownership within the building. As is the case with interlocking programs, communication and agenda problems remain. However, there is an agreement that when problems arise, the affected superintendent, principal, and Cooperative director will develop joint solutions.

Facilitating Operating Procedures

To pursue the mission of effective child service, the Cooperative has developed and institutionalized sets of facilitating operating procedures and programs of action. Among those are the following:

Inservice education for regular education teachers and administrators. Such inservice activities include training and informational presentations within district-allocated inservice education time; technical assistance to districts in setting up quality inservice activities based on locally defined needs; and activities to orient regular staff to Cooperative functions and exceptional child characteristics. A continuing area-wide "Principals' Inservice Series" addresses regular and special education leadership needs defined by the principals. Other activities include specially requested workshops for specific audiences; regularly offered and specially tailored college classes; board credit classes (credit on the salary schedule) taught by Cooperative staff in districts with such policies; and a month-long intensive training program for regular class teachers to help them develop the intervention and teaching strategies that allow a mildly handicapped student to remain in the regular classroom. Over a six-year span, the latter program has had a dramatic impact (Mickler, 1981). Cooperative coordinator staff, *all* trained and skilled inservice presenters, have taken part in leading such activities, as well as developing new training materials and activities of their own.

Building teams. This device was fostered by the Cooperative to provide an on-line support system to regular staff in their own buildings, and to reduce unnecessary special education referrals. Teams vary in composition and operating procedures, depending on individual building discretion. However, all have the same goal: to aid teachers in problem-solving for students with learning difficulties. The diagnostic, instructional modification, and monitoring activities of such groups result in greater internal ownership of problems and in better data if a special education referral is necessary. The fact that the building principal is the leader of the team provides a linking key.

Cooperative program coordinators. The coordinators are given a high degree of responsibility. They act as communication links between Cooperative administration, principals, district administration, and special education staff; as program managers ensuring effective and articulated service; as facilitators of staff growth through consultation and supervision; as "troubleshooters" who iron out problems or disagreements at a given site; and as inservice trainers for both regular and special education staff. At the same time, the coordinators and administrators of the Cooperative constitute a management *team* which meets regularly to review developments, plan action, and integrate efforts. They are truly *support* people.

Administrative support. This is expressed in several ways, including accessibility of administrators and coordinators to staff; a constant thrust toward growth and improvement provided by the director; planning for staff devel-

opment; credibility of the administrative team with regular educators; attention to problems and concerns in the field; and support for professional organizations, including parent groups. When problems in the operation of Cooperative programs emerge, problem-solving task forces are created involving line staff, on released time. This policy ensures accurate input and promotes among staff the feeling of being a meaningful part of the organization.

Staff development. The concept of staff development is an inclusive one. Needs are identified by staff themselves, by coordinator observations of teachers and programs, by analysis of operational problems, and by analysis of skills and information needed to implement adopted changes. Staff development activities include growth-oriented supervision, participation in problem-solving and decision-making task forces, organized training and informational programs for itinerant staff on a monthly basis, board credit classes, a voluntary "brown-bag" session focusing on a variety of topics, attendance at specific conferences and workshops, encouragement to conduct research on the job, and college classes, among others. As interesting outside innovations are noted which appear to be of value to the Cooperative and its staff, members are sent outside for specific training. The whole concept emphasizes growth in service effectiveness through growth in staff knowledge, skills, and attitudes.

Program articulation. Program goals and descriptions are written, shared, and disseminated across the service area, using the model illustrated in Figure 1. The regular coordinator meetings address articulation problems and issues. Coordinators themselves act to ensure continuity across sites. In addition, many of the problem-solving task forces address articulation directly or indirectly through clarifying program goals, procedures, and standards.

Interdisciplinary teams. Child service decision-making is genuinely interdisciplinary in nature. By Cooperative board edict, the principal is the formal leader of the team. Diagnostic work is completed by the psychologist, special and regular teachers, counselors, and school social workers. It is evaluated in a team setting.

Should the child be eligible for special education services, the principal chairs the meeting in which programming decisions are made, with regular and special education responsibilities allocated, as appropriate. A team remains the same as long as the child participates in a program, allowing for continuity in decision-making, service delivery, and monitoring.

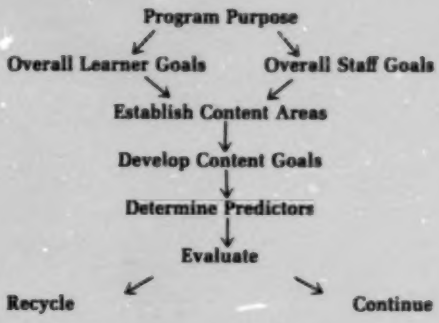

FIGURE 1. Model for developing program goals.

Remaining Problems and Concerns

The positive attributes of the Cooperative should not mask the fact that it still faces problems and concerns. Some of them arise from the rural delivery system context, some from chosen solutions.

Problems of program and role ambiguity continue to create stress on personnel and pressures to provide services to children when the problem is not inherent in the child, but in the school. Principals have a wide range of instructional leadership skills and orientations, making consistency of service somewhat uneven. Given the variations in administrator behavior and the distances between sites, problems still exist in ensuring consistency and follow-through in the application of administrative, operational, and instructional procedures.

In the building-based programs, the principal has both direct authority and evaluative responsibility. This places program coordinators in a delicate position—able to recommend changes, but not in a position to enforce them. Unless the principal takes direct action to endorse and uphold those recommendations, teachers may evade them.

As a rural area, personnel recruitment and

retention continue to pose problems—not to the extent of real difficulty in staffing programs, but sufficient to prevent the desired selectivity. In a time of fiscal austerity and uncertainty, the rationale for program changes is not always accurately interpreted, adding to staff anxieties.

Staff development opportunities are not consistent. While itinerant staff have monthly activities, released time would be necessary to provide the same opportunities for teachers in self-contained and resource programs. The Cooperative board has not provided this, and the gaps in opportunity are readily perceived by staff.

Future Directions

Single, isolated changes are unlikely to persist or accomplish much if interrelated problems and conditions are not addressed. The Central Kansas Cooperative has undertaken a three-year project to improve (a) program performance and (b) staff effectiveness and job satisfaction. In planning and implementing this project, the Cooperative has reached beyond the information typically contained in special education and educational administration literature to include concepts from organizational development, business management, human capital development, studies of educational change, and studies of human performance motivation.

As a first step, a statement of mission for the Cooperative will be developed in a retreat setting, with the aid of a process consultant. Specific instructional and support service program goals will then be derived, and descriptions of the programs necessary to attain those goals will be developed. Next, job roles necessary to implement program processes will be defined, and tentative statements constructed of the competencies and characteristics necessary to implement the job roles effectively. Taken together, these steps constitute the building blocks for development of the following interrelated programs of action:

- A *personal recruiting system*, to give the Cooperative access to a larger pool of quality candidates, allowing greater selectivity.
- *Careful personnel selection* to screen candidates systematically for competencies necessary to fulfill job roles, as well as for personality characteristics bearing upon performance and job satisfaction in specific roles and in a growth-oriented special education program. The system will also provide initial personnel data on which to base the degree and nature of early support needed on the job.
- A *personnel performance appraisal system* to enable facilitative supervision toward growth, provide a basis for creating personnel performance support systems (such as organized staff development), and establish an effective data base for personnel decision-making.
- *Personnel support* in the form of technical, emotional systems which minimize performance disincentives and promote the following elements: (a) growth in individual competence and job satisfaction; (b) personnel identification with the special education organization and its mission; and (c) growth in the Cooperative's effectiveness in child service.

CONSIDERATIONS AN EFFECTIVE RURAL SYSTEM MUST ADDRESS

An effective rural special education delivery system does not occur either by chance or by simple hard work. Rather, "working smart" is important. A number of factors must be addressed in a systematic manner.

Districts must "own" the delivery system. Separation promotes "we" versus "they" thinking, program fragmentation, and conflicts that are stressful to special education staff. Superintendents of member districts must make it clear to building principals that they are to be the instructional leaders of *all* instructional programs in their own buildings, including special education programs.

There must be clarity of mission. That mission must be supported explicitly by the statements and actions of district and Cooperative chief administrators, and must be clearly and constantly communicated to special education staff.

Certain kinds of persistent problems are to be expected and should receive frequent attention. Transportation issues must be managed in such a way as to minimize cost and child dislocation, while at the same time minimizing the amount of productive staff time lost in travel. Other problems needing ongoing attention include providing for low incidence populations; dealing with tendencies toward "convenient" rather than necessary child

programming; identifying and dealing with program fragmentation; and preventing the sense of isolation and lack of support among special education staff.

Most problems will not be solved in isolation. Systematic planning must be built into the operation and decision-making of the delivery system. Such planning must strive for clarity of program goals, processes, and structures, and must try to ensure that the necessary resources and conditions are in place. Not the least of these resources is the "human capital" represented by staff. Considerable attention must be given to creating the kinds of staff recruitment and selection systems necessary to capture skilled staff, as well as to providing the kinds of supportive supervision and staff development opportunities which promote continued growth in effectiveness. Further, consistent action must be taken to create the kinds of technical and emotional support systems that facilitate high levels of performance and job satisfaction in carrying out the mission of the rural regional special education delivery system.

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Models for Serving Rural Students with Low-Incidence Handicapping Conditions

DORIS HELGE

Abstract: Traditional models designed to provide a continuum of services to handicapped students are inadequate for rural schools attempting to serve students with low-incidence disabilities. Because of the tremendous diversity in rural schools and communities, there is no "one" rural service delivery model. This article delineates factors that must be considered and variables that must be controlled by the rural service delivery model planner. Samples of successful statewide and local district models are described. Each model was designed by manipulation of variables such as staffing, transportation, and governance systems after consideration of district and community characteristics.

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■ Historically, a majority of rural educators have not voiced problems concerning serving mildly and moderately handicapped students. Such students were typically not identified as handicapped in rural areas or were thought to have unusual learning needs but were served in the regular classroom. Thus, compared to their nonrural counterparts, rural mildly/moderately handicapped students have had minimal problems gaining the acceptance of regular classroom teachers and students.

This situation partly reflects the rural norm of "taking care of one's own," as well as the fact that rural Americans inherently dislike the labeling of individuals. It is also partially attributable to the practical nature of rural educators. They tend to "make do" when given inadequate resources (in this case, lack of special education classes).

However, situations were more problematic when teachers were asked to serve students with severe handicaps and those classified in other low-incidence categories. (In rural school systems, this typically includes students having hearing impairments, emotional/behavioral disorders, blindness or other visual impairments, severe orthopedic disabilities or other health impairments, severe mental retardation, and those with multiple or severe handicaps. However, in very small rural schools, a child with mild or moderate mental retardation may have a "low-incidence handicap.")

Rural schools did not have enough enrollments of children with low-incidence disabilities to gain funding for segregated special education classrooms or teaching specialists. They typically also had no other available services or supportive staff. Thus, mainstreaming students who needed major adjustments in classroom curricula, materials, or activities

was particularly difficult for regular classroom teachers with large numbers of nonhandicapped students.

Until Public Law 94-142 was in "full implementation," rural children having low-incidence handicaps were typically unserved, or at best, underserved. A national study comparing rural special education services before and after the implementation of P.L. 94-142 indicated that tremendous changes occurred in services available to rural students with low-incidence handicaps (Helge, 1980).

Data gathered for this study via on-site and telephone interviews indicated dramatic increases in the percentages of low-incidence children identified and served. (The percentage of change was 47% from 1975 to 1980.) This was particularly true with severely handicapped populations. Before the implementation of P.L. 94-142, many rural districts/cooperatives had few special services for severely handicapped students. In fact, a majority of the districts/cooperatives were placing such students in residential and private schools and agencies. By 1980, most sampled districts were trying to serve them in their home district/cooperative. In spite of this progress, the overwhelming majority of the rural school systems involved in the sample reported that students with low-incidence handicaps were the most difficult population to serve.

INADEQUACIES OF TRADITIONAL SERVICE DELIVERY MODELS

Traditional models of providing a continuum of services for students with handicapping conditions (i.e., various adaptations of the classic Reynolds framework introduced in 1962) have been vital to those planning special education services in nonrural settings. These models typically include levels of service such as those depicted below and recommend child placement based on an assessment of the level of severity of a handicap.

Hospitals and treatment centers
Hospital school
Residential school
Special day school
Full/part-time & special class
Regular class/resource room
Regular class with consultation
Regular class (without consultation)

Such models are much less appropriate for rural school systems, especially those located in remote geographic areas. For example, a district having two students with cerebral palsy located 250 miles from each other typically cannot cluster these students for services.

Many of the levels of the traditional continuum do not exist in rural areas. For example, many rural school systems historically sent their students with low-incidence handicaps to residential schools located outside their states because they had no in-state option. Likewise, special day schools do not exist in many rural areas. They are simply not a practical alternative.

Traditional continuum-of-services models also assume the existence of a greater number of staff than is typical in most rural schools. An adequate funding base for such staffing has also been assumed, although numerous studies have shown that this is certainly not the rule in the majority of rural systems.

Another inclination of those proposing special education service delivery models has been to identify "the" model for rural service delivery. For example, after the passage of P.L. 94-142, special education cooperatives became widespread, allowing school districts to combine scarce resources so that they could pay for expensive specialized services and staff.

The predominant special education cooperative model involves hiring one or more itinerant specialists who travel as needed to isolated students requiring specialized services. They provide services ranging from direct instruction of children to training staff and consulting with parents. This type of structure has made services available to many previously unserved rural students with handicaps.

However, cooperatives and itinerant staff shared among districts within a collaborative structure have not been a panacea. Even cooperatives have frequently been unable to afford to hire a full-time itinerant staff member to serve only a few low-incidence handicapped students in widely scattered geographic terrain. Itinerant staff tend to be highly stressed professionals, and attrition rates are high. Many itinerant personnel must be self-reinforcers not only when traveling but also when housed in school buildings where their role is "different" and typically misunderstood. Program continuity is difficult, even under the best of arrangements, when a person with specialized training is only able to visit or train the local classroom teacher a few times per

year. Finally, traditional itinerant service arrangements are not always an option. Distance between students and services, geographic barriers, and/or inclement weather frequently prohibit transportation of students or professionals on a consistent basis.

CONSIDERATIONS FOR SERVICE DELIVERY PLANNING

Just as urban models are not appropriate for rural schools, there is no "one" rural service delivery model for the great variety of rural school systems and their attendant subcultures. It cannot be assumed that a practice effective in remote Wyoming ranching territory will be viable on an isolated island, in part of a cluster of New England seacoast towns, or in an agricultural migrant camp. Instead, service delivery models must be individually designed for the rural school system and subculture in which they will be implemented.

Each of the 15 factors discussed in the sections that follow must be considered by those designing a service delivery system for students with low-incidence handicaps. Most importantly, the interrelationships between them must be assessed. For example, districts with equivalent population densities should plan in significantly different ways if one school system is surrounded by mountains with relatively untraversable roads all winter, while the other is located in a flat agricultural area with mild winters.

Relationship of District Governance System to External Resources

A district that is administratively part of a cooperative or has access to a state's educational service district typically has greater resources available to it than does a district where the majority of external resources must come from a centralized state education agency (SEA). This is particularly true when the isolated district is located a great distance from the SEA or when geographic or climatic barriers exist.

Population Sparsity

The population per square mile is significant for the model planner. Although a rural system is by definition relatively sparsely populated, services must be planned in a dramatically different manner for small clustered townships than for schools located on remote islands, vast rangelands, or in the isolated bush villages of Alaska. This is important in determining whether students with similar learning needs are available to be clustered for services and in assessing proximity to services.

Distance From Student to Services Needed

Assuming a service exists, the planner needs to know the distance from child to service location or from itinerant staff member to child. Knowledge of the actual travel time will assist in determining whether a service or professional should be transported to the student or vice versa.

Geographic Barriers

Absolute distance from potential services to a student is frequently complicated by geographic barriers such as mountains, untraversable roads, or the necessity of taking ferries or small planes. In some areas of the Northeast and Northwest, roads do not exist. Personnel must either travel by light plane or snowmobile, or even detour through Canada, to reach their rural district. Because the U.S. government owns and prohibits travel through large areas of several Western states, school personnel in these states must frequently travel an extra 2 or 3 hours to reach their service destinations.

Climatic Barriers

In areas with severe climates or seasonal problems such as heavy spring flooding, it may be relatively unimportant (and highly frustrating) to planners that a qualified professional or program is located only an hour's distance from the child. Students with disabilities suffer when program continuity is frequently disrupted by weather-related problems. Administrators also experience difficulties with planning or implementing longitudinal goals for a child.

Language Spoken in the Community

Just as primary languages spoken by a handicapped child must be considered when designing an IEP, the primary language of the rural child and his or her family also has relevance for selecting appropriate personnel, especially

itinerant staff who visit rural communities with lifestyles and cultures different from their own. It is also extremely important to the administrator who is considering clustering students for services.

Cultural Diversity

Besides the most readily recognized ethnic cultures with which service planners try not to interfere (knowing that disrupting family life interferes with the effectiveness of services), unique rural subcultures must be considered. Research has clearly indicated that some IEP requirements, though well intentioned, were written without extensive familiarity with various rural cultures. Implementing the requirement that written parental permission be obtained, for example, is particularly difficult in some rural-based cultures having no written language.

Similarly, some rural-based subcultures have no concept of special education terms (e.g., learning disabilities). Some religious cultural minorities also have beliefs and traditions that are at variance with school traditions, such as religious holidays that conflict with a school calendar of services. Planners must also be aware of unique community and parent expectations for the success of handicapped students.

Handicapped students who belong to transient rural subcultures (such as migrant and military populations) also provide unique challenges for the rural special education planner. These include tracking children to ensure program continuity.

A relatively new phenomenon facing many rural special education planners is the "boom or bust" syndrome prevalent in states with a priority of developing energy resources. Some special education administrators, faced with "overnight" doubling of their special education population because of temporary influxes of workers, find that by the time they locate resources to provide services, their populations have significantly decreased.

Economic Lifestyles of the Community

Rural communities, particularly those with relatively nondiversified economies, tend to schedule their lives around the requirements they face as they attempt to make a living. Service delivery planners should be aware of total community priorities and events that might influence or even interfere with service delivery. Examples include handicapped children who are absent from school during peak periods of agricultural, fishing, or timber "harvesting" or during seasonal festivals in resort communities.

Community Communication and Power Structures

The special education planner who ignores the existing communication and power structures of a rural community will probably not be required to plan such services for an extended period of time. Typically, informal systems are more potent than those that are formally outlined. Informal rules often have significant ramifications for serving students with disabilities. For example, they may affect such issues as who, in reality, assigns duties to the itinerant specialist, confidentiality of student data, and the person to whom service deliverers feel accountable.

Ages of Students

The planner should ascertain the ages of children to be served in the local district and in any adjacent communities or systems in which collaborative services are being considered. The United States still has many one-room schoolhouses in which one teacher is responsible for a wide range of ages. Studies have shown that such a situation entails a great deal of stress associated with burnout. (Dickerson, 1980; Helge, 1981.) Thus it behooves the administrator to attempt to group students in similar age groups if at all possible. Exceptions, of course, are made when developmental age is more critical than chronological age.

Types and Severity Levels of Disabilities

The level of severity of a disability frequently determines whether or not a student can receive services within the regular classroom setting. Some types of handicapping conditions tend to be more prevalent in some rural subcultures than in others. The National Rural Project, in its 1978–1981 studies, for example, found that areas with colder temperatures tend to have more hearing-impaired children, and that areas of poverty as well as migrant cultures tend to have greater concentrations of

mentally retarded children because of inadequate nutrition, health care, and prenatal care. Designing services for such unique groups of students requires specific actions by the planner.

History of Special Education Services

Past services to handicapped children in a particular service area are closely linked not only to available funding and awareness of P.L. 94-142 regulations, but also to community attitudes. In rural communities, key power sources (whether the school board chair or the wealthy farmer who likes children and serves as a janitor during the off-season) have pervasive influences on school services.

Rural citizens are typically unimpressed by what they are told they "have to do" for handicapped students. In contrast, they are highly motivated to provide appropriate services when the initiative is theirs. Adept administrators understand and plan to use such inherent rural community attributes, particularly when attempting changes. In rural communities having a unique ethnic heritage, it is possible and important to plan new services that will be palatable to the native heritage and as much as possible preserve the community's self-determination and identity. It is not surprising that isolated rural communities whose only choice in the past has been to send their disabled students to communities or cities with dissimilar cultures have resisted change—and sometimes, special education as a concept.

Currently Available Resources

While P.L. 94-142 requires that appropriate services be available to each student in the least restrictive environment, the law does not state how such services are to be delivered. Despite their reputation for inflexibility, rural citizens have, out of necessity, long tended to be creative problem-solvers. The model planner should assess all existing resources. The resulting catalog of current resources should include intra-school and external facilities, equipment, and so forth. The planner should then identify and take advantage of the "hidden" resources endemic to rural America such as its sense of volunteerism and community spirit.

Cost Efficiency

When feasible, the planner should assess costs of alternate systems of providing a given service. The fiscal realities of rural schools, departments, and classroom budgets must be considered. However, the planner will typically not be faced with evaluating monetary trade-offs between equivalent alternatives. It is more likely that he or she will have to present a need and request funds from a supervisor, a cost-conscious rural school board, or a community organization.

The administrator should be knowledgeable of budgetary accountability systems. Data gathering and subsequent presentations should consider cost efficiency in light of a varying range of potential effectiveness. The planner should address not only local per-pupil expenditure vs. out-of-district placement costs, but funding alternatives. The planner should also be prepared to answer questions concerning the percentage of the local school district contribution for salaries, transportation, consultants, and equipment.

Expertise and Attitudes of Available Personnel

The planner must not only note the grade levels and types of disabilities that existing personnel are prepared to serve, but also their flexibility in serving as a generalist (i.e., teaching several types of disabilities) or as a specialist. Formal as well as informal training must be considered, and attitudes of personnel toward serving children with various disabilities are equally important. The planner may need to structure staff development opportunities designed to guarantee that students are served by personnel who respect them and are comfortable with their specific disability.

DEALING WITH INTERRELATIONSHIPS AND COMBINATIONS OF FACTORS

The importance of understanding and considering the interrelationships of all 15 of these factors cannot be overemphasized. Combinations of factors are critical and should be weighted more heavily than single-factor barriers to service delivery.

It is difficult to design an effective service delivery model when a rural district has multiple cultures or when, for example, the disabled student resides in a sparsely populated area

150 miles from essential services. The task is even more difficult when the student's culture differs significantly from that of the nearest service area, when service delivery is inhibited by geographic or climatic barriers, or when the community's power structure has low expectations for the success of such a student.

The planner should identify which of the 15 variables are problematic, select those that appear to be most important, and address those variables first. Problems that can be quickly ameliorated (e.g., by linkage with technological or other resources available through the state or by gaining the understanding and support of the local power structure), should be. Usually, the planner can merely acknowledge factors that are unchangeable "givens," such as spring flooding, when designing the service delivery plan.

Figure 1 illustrates the fact that planning becomes a more arduous task as the number of problematic factors increases. As one factor is combined with another and the planner spans out to each concentric circle of Figure 1, it is increasingly difficult to design an appropriate service model.

MODEL DEVELOPMENT

After considering these factors, the planner is ready to develop a workable service delivery model. There is no such thing as a pure model for rural special education service delivery. Rather, eclectic approaches are the rule, and numerous variables must be juggled (such as cost vs. intensity of need or availability of alternate services).

Technological advances are greatly improving the options of the local rural district. For example, it is no longer necessary to choose between hiring a specialist or a generalist if a generalist can use satellite instruction (or some other technology) to supply specialized instructional content.

Variables of a service delivery model that must be manipulated so that the resulting eclectic model has a "fit" are as follows:

Equipment
Facilities
Financial system
Staff development program
Transportation system
Staffing for services

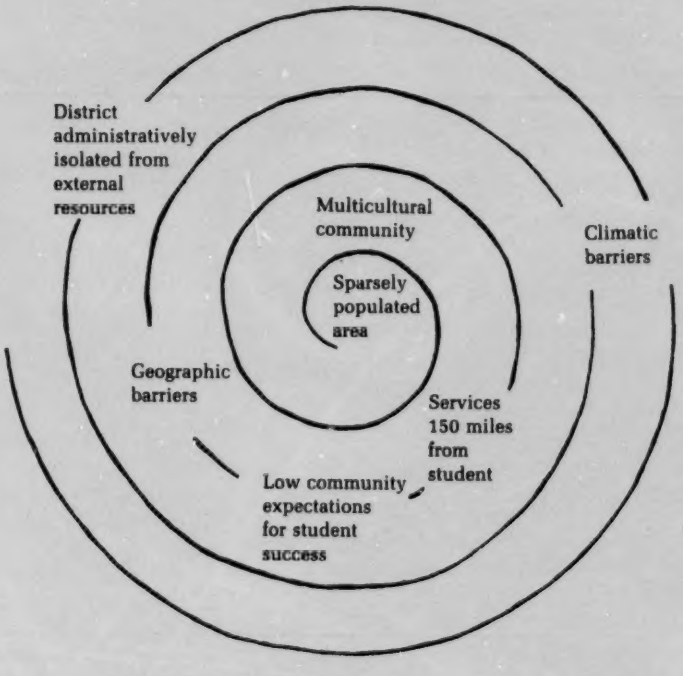
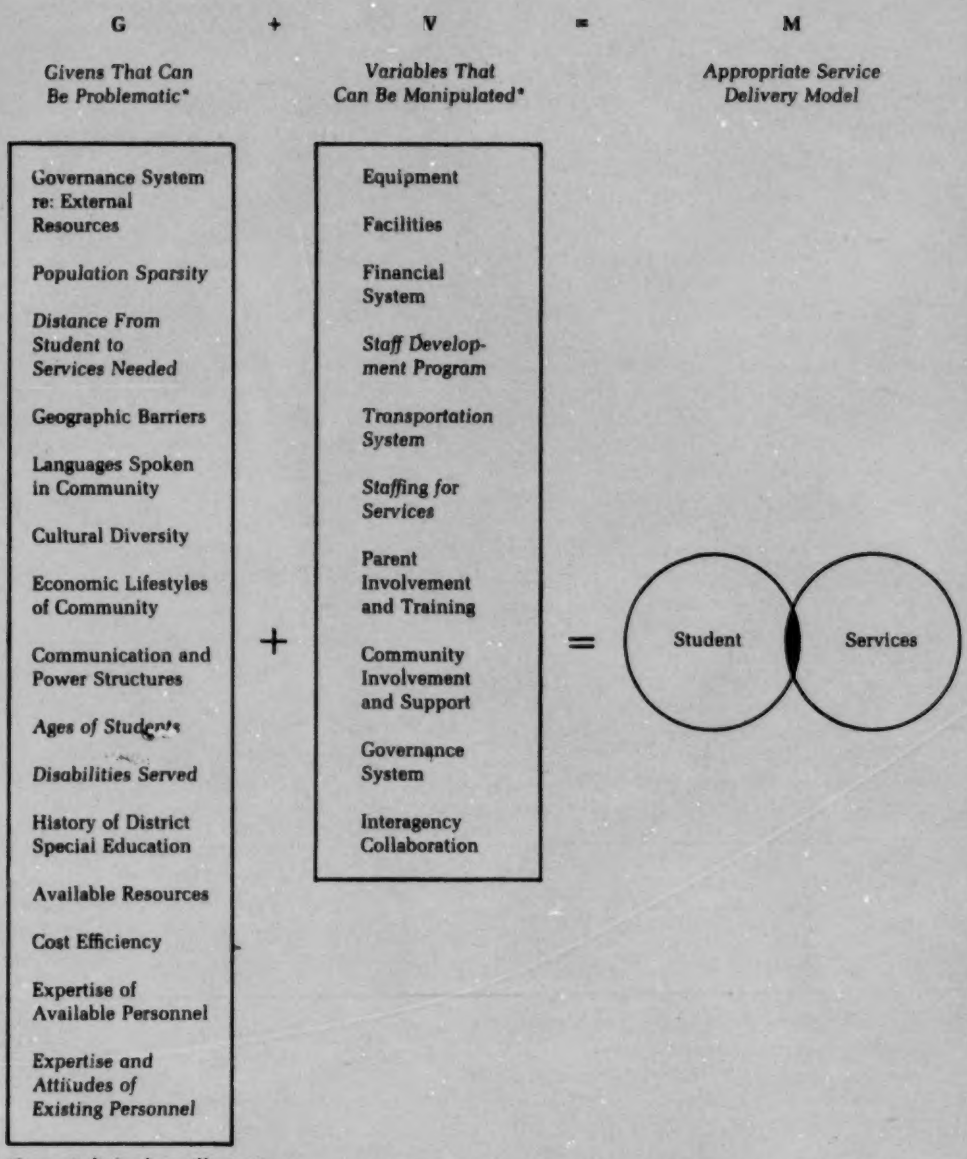


FIGURE 1. Increasing levels of difficulty in designing a service model.



*Items italicized are illustrative.

FIGURE 2. Consideration of "givens" and manipulation of "variables" allows the planner to create an appropriate service model.

Parent involvement and training
Community involvement and support
Governance system
Interagency collaboration

Figure 2 illustrates the process of designing a rural service delivery model. Factors that can present planning problems but cannot be controlled by the model designer are termed "gi-

vens." Factors that can be manipulated by the planner are labeled "variables." The planner can create an appropriate service delivery model by recognizing givens and controlling variables.

SAMPLES OF SUCCESSFUL SERVICE DELIVERY MODELS

The reader is reminded that low-incidence disabilities vary greatly from district to district because of population and environmental influences. Thus, in one district, a given model may be used to serve students who are cerebral palsied or deaf. In another district, the model may be adapted to serve the only moderately retarded student in the district.

Development of each of the successful models described in this section involved the recognition of factors discussed in the section on considerations for service delivery planning. Each design highlights the manipulation of one or more of the ten variables listed, although none of the models controlled or changed all of them.

An adroit planner would not directly "transport" any of the sample models, but would consider them illustrative of the ways in which factors can be recognized and/or variables manipulated in order to create a subculture-specific model. Table 1 illustrates the variety of formats used by the sample models.

State-Funded Intermediate Education Units (IEUs)

This administrative structure uses regional specialists who provide technical assistance and consultation to local district personnel. Some IEUs are designed specifically to provide special education services, and some are designed to provide all specialized services that are difficult for small districts to provide (e.g., comprehensive vocational education). Most IEUs are administratively part of the state department of education, although one state (Nebraska) specifically separates its IEU from the state education agency.

IEU personnel generally provide services only to other professionals. This pattern is sometimes varied to demonstrate an effective technique or to train a professional to deliver the service independently in the future.

Although inservice activities are sometimes held across regions or on a statewide basis, most are specifically planned for a district or region. Some IEUs have centralized media and materials centers with extensive options for check-out, and some states incorporate mobile materials centers. Generic specialists (e.g., resource room teachers) at the local level are sometimes supported by specialized regional consultants (i.e., those dealing with a specific type of exceptionality such as visual impairment). This type of model is responsive to rural remote districts when consultant responsibilities are aligned by geographic regions vs. an entire state. The planner adapting it for a particular district would want to design safeguards so a generic specialist did not become too dependent on a regional specialist. This would prevent inadequate services or a lack of services in the absence of the regional specialist.

Statewide Networks of Itinerant Specialists

The small rural state of New Hampshire has implemented a system to serve students with the low-incidence handicaps of hearing and visual impairments. This system is operated by contract with a private firm that hires consultants to provide services to blind and deaf students in remote rural areas with no specialized local personnel. These consultants also train local personnel to deliver follow-up services until they return. Items from an extensive media and materials center are taken to the local district for use when the consultants are absent, and are varied and updated as needed.

Statewide Model to Provide Consulting Services for Teachers

The rural state of Vermont was funded by the U.S. Office of Special Education Programs (SEP) to develop a trainer-of-trainers model addressing the needs of students with low-incidence handicaps. The model involves collabortion between the University of Vermont, the state department of education, and local rural districts across the state. Teacher consultants, similar to master teachers, were trained by university faculty to train regular class teachers to mainstream and effectively work with low-incidence handicapped children. All teacher consultants became adjunct faculty of the university and teachers who were success-

TABLE 1
Examples of Models Which Manipulated "Variables" After Considering "Givens" of Serving Students with Low-Incidence Handicaps

Sample Model	*Equipment*	*Facilities*	*Financial System*	*Staff Development Program*	*Transportation System*	*Staffing*	*Parent Involvement*	*Community Involvement*	*Governance System*	*Interagency Collaboration*
State-funded IEUs	X	X	X	X	X	X			X	X
Statewide networks of consulting itinerants	X	X	X	X	X	X				
Statewide model to provide consulting services for regular teachers of low-incidence handicapped				X		X				
Statewide I-team model re severely handicapped				X			X		X	X
Statewide model to provide services to culturally different students		X	X	X	X	X	X	X	X	
Local special education cooperatives	X	X	X	X	X	X			X	X
Noncategorical resource rooms	X	X		X		X				
Model identifying and using all potential resources within an isolated district	X	X	X			X	X	X		X
Models incorporating advanced technologies	X	X		X	X	X	X			X
Models using paraprofessionals			X	X		X		X		

fully trained received university credits. Teacher consultants did not provide direct services unless it was necessary to demonstrate effective techniques. The model provided for consistent availability of consultants to the regular educators.

Statewide Interdisciplinary Team Model

A contrast to the one-on-one model for training regular educators is Vermont's Interdisciplinary Team (I-Team) Model. It is organized specifically to enhance services to more severely handicapped students. The concept involves local I-Teams, a regional educational specialist (ES), and a state I-Team. The levels interface with each other. Each I-Team contains several specialists such as special educators and specialists in communications, physical therapy, occupational therapy, medicine, engineering, and carpentry.

The regional educational specialist is locally based and coordinates services for multihandicapped students in a region. A local or state I-Team member may be asked for assistance. The regional ES position reduces travel time required to deliver services including assessment; staffing to generate recommendations; training to teachers, parents, educational specialists, and others; monitoring the implementation of recommendations; and coordinating training and consultative services.

Local I-Team members encourage parent support by home visits and by providing parent training. Parents participating in I-Team services also may attend formal class sessions taught by state I-Team members or university faculty. The state I-Team serves districts that lack a local team, and also provides technical assistance and training to all local I-Teams needing such services.

Statewide Model to Provide Services to Culturally Different Students with Moderate and Severe Handicaps

Sparse populations of Eskimo, Indian, and Aleut families scattered across the 586,000 square miles of Alaska presented unique challenges to those attempting to upgrade the state's system for full implementation of P.L. 94-142. The state's previous system placed students with severe and other low-incidence handicaps in urban residential schools or foster care. Such a system grossly interfered with the self-determination of native families and with perpetuation of the cultural identity of remote Alaska villages. Problems also existed with continuity of local services because of the high personnel attrition rates of newcomers attempting to live and work with bush village cultures.

A statewide model entitled Alaska Resources for the Moderately/Severely Impaired (ARMSI) was designed to provide professional services and consultation to students and their teachers. The primary strength of the model is that services are offered within the local villages. The thesis of this model was that most local schools, with the proper degree of assistance, can provide an appropriate public education for most students.

ARMSI was initiated in 1981, and centralized the coordination of all services for this massive state, although service delivery was localized. ARMSI became the umbrella service agency and recruited experienced staff who previously worked with various fragmented service agencies. The 18 staff members thus have extensive experience working in Alaska bush villages and knowledge of how to work and communicate with villagers.

Staff serve as itinerant specialists and offer three basic types of assistance: (a) direct instruction and other services to children and youth; (b) training of and consultation with school district staff; and (c) dissemination of instructional materials and information. This assistance takes place during on-site visits to the villages 3 to 4 times per year. Personnel stay at a school or district for about 3 days on each occasion. The visits are part of technical assistance agreements designed by ARMSI and each local district. Because the itinerant educators continue to work with the same children for several years, the project has the potential of bringing greater educational continuity. Longitudinal goals are more likely to be carried out.

Cooperative Administrative Structures at the Local Level

P.L. 94-142 regulations specify that any LEA unable to qualify for a $7,500 allocation (based on the number of handicapped children served) will receive no pass-through funds. This guideline obviously encourages the formation of consortium arrangements to provide special services, and these have typically been

titled "special education cooperatives."

The operation of cooperatives is as varied as the geographic terrain and climatic conditions in which they exist. Pooling funds through various kinds of administrative structures allows single districts that are part of a cooperative to better meet the needs of rural students with low-incidence handicaps. Where geographic distances and climatic variables are not unwieldy, districts can cooperatively hire a person to serve children who were previously unserved or underserved because a single district could not afford a full-time person to serve a few students.

Districts can also cooperatively fund and host inservice training addressing low-incidence needs, and jointly fund relevant equipment, media, and materials. Districts located in close enough proximity frequently cooperatively transport students and/or centralize diagnostic or intervention services.

Noncategorical Resource Room Model

This model is frequently called an interrelated classroom or simply, a resource room. It is typically used by local districts having too few students with any particular disability to warrant establishing a segregated class for children with mental retardation, learning disabilities, etc. The emphasis in variations of this model is on improving academic, behavioral, or psychomotor deficits through individualizing a child's curriculum and other learning experiences.

The types of disabilities served in each classroom vary tremendously from district to district. Students are typically mainstreamed into regular classes whenever appropriate. In a cooperative, students are sometimes transported to a central location for the resource room. More frequently, the noncategorical service area is confined to one district or building. This ensures greater access to regular classes and regular classroom teachers as students are mainstreamed. In fact, the strongest programs observed by the author have been those with the greatest interaction between the noncategorical resource teacher and regular educators.

One variable to be manipulated in this model is the percentage of the resource teacher's time spent providing direct services to students assigned to the resource room and the percentage of time spent consulting with their regular classroom teachers.

Some resource rooms serve students who are not classified as special education students so that the program will have less stigma and regular class teachers will be more likely to use materials available through the resource room. The most effective programs totally individualize the implementation of IEP goals, and many resource rooms seldom involve students actually working together.

Some resource rooms have aides funded by the district or by another program such as a government CETA program. Others involve parents, community volunteers, or university practicum students, and many rural resource room teachers function independently.

Model to Identify Scarce Resources

Several districts that were extremely isolated from other districts and from state resources have identified and optimally used every possible resource within their community. They have found that using community personnel as resources has created a side benefit of additional community support for their schools.

Although the model varies from community to community, the following basic components are consistently present:

1. Completion of a needs assessment at the total school and individual classroom level.
2. Completion of a resource survey of all school personnel, listing skills and competencies that could be shared with others, including children with low-incidence handicaps. Data on potential community and parent resources were an integral part of the resource base. Community facilities and equipment are included in the resource data bank.
3. Use of a manual card-sorting or a computerized retrieval system to link identified resources and needs. This linkage may include having one teacher, uncomfortable working with a student with a hearing impairment, view another teacher with skills in this area. It may also include using high school students in a child development class as "extra manpower" by having them assist a special education teacher with follow-up motor skill activities for students with severe physical impairments. Other schools have used unemployed certified teachers, retired teachers, and other community members as volunteers in the class-

room. Isolated resort communities have actively recruited the assistance of long-term visitors. Volunteers provide services ranging from tutoring students to furnishing transportation. They reduce staff development costs by managing a classroom while a teacher engages in inservice, peer observation, or other relevant activities.

The legalities and protocol of each model are individualized for the particular district in which the model was incorporated. However, in all cases, an evolving foundation of school resources was established. Community support for the school was enhanced in each location because citizens became integrally involved in special education programming.

Models Incorporating Advanced Technologies

The use of advanced technology as a tool for serving remotely located students with low-incidence disabilities is rapidly growing in popularity. For example, a variety of systems has been used to send instructions to isolated educators inadequately trained to teach children with low-incidence handicaps. Model design ranges from consultant-teacher communication by satellite to mobile inservice vans bearing computers programmed to teach specific subject areas. Less expensive models include exchanges of videotapes and one/two-way television instruction.

Technological approaches will be limited more by the imagination of the service planner than by the cost of equipment. Alternate types of advanced technologies are becoming increasingly available in agencies external to schools. Many districts have found human service agencies willing to collaborate in service delivery, especially when highly specialized equipment is not used by the agency on a full-time basis. Likewise, many rural businesses have been willing to share equipment. Adept administrators have been able to borrow equipment by emphasizing advantages to local businesses, such as enhancement of their community image and potential tax write-offs.

Models Using Paraprofessionals

Trained paraprofessionals are frequently used by rural school districts when certified personnel are unavailable. Paraprofessionals support special and regular educators conducting classroom or therapy activities with a handicapped student. Tutoring activities might range from academic or psychomotor curriculum activities to counseling regarding improvement of social skills. Paraprofessionals might also conduct follow-through exercises assigned by a speech, physical, or occupational therapist or assist with adaptive physical education exercises.

An essential ingredient in the effective design of a paraprofessional model is appropriate training and careful observation of performance. Trained paraprofessionals are frequently teamed with parent and community volunteers. Paraprofessional personnel are usually paid staff members, although there have been instances in which they functioned on a volunteer basis. Most rural paraprofessional programs have assumed that paraprofessionals will function as generalists. Their specialized tasks are generally limited to supervised follow-through activities assigned by speech, occupational, or physical therapists.

SUMMARY

Traditional models designed to provide a continuum of services to handicapped students are inadequate for rural schools attempting to serve students with low-incidence handicaps. Because of the tremendous diversity in rural school systems, there is no "one" rural service delivery model. There are, however, a number of community and district characteristics that a model designer must consider. The planner may then appropriately control variables such as usage of personnel, transportation systems, and community involvement to design an individualized model viable for the student, district, and community.

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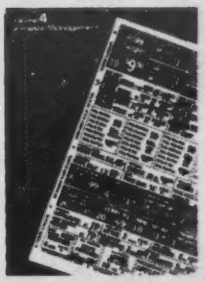

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Providing Services for Rural Gifted Children

GAYLE HAYWOOD GEAR

Abstract: Small numbers of gifted students in rural schools inhibit programming by special classes or hiring of additional staff. Inadequate financial resources also frequently impede the development of comprehensive programs. Because rural schools vary in capacity and commitment to respond, there are no standard procedures for programming for gifted students. This article develops a foundation for program efforts which acknowledges the diversity among rural schools and respects the capacity of their staff to innovate and use existing community resources.

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■ Rural schools share similar challenges in their efforts to program for gifted children. Gifted children are often sparsely distributed across large geographic areas; consequently, enrollment may not be sufficient to justify special classes or additional staff. Financial and human resources, too, may impede the development of comprehensive programs throughout the grades. Moreover, teachers may be unfamiliar with the extraordinary needs of these children. Specialists in the education of gifted children often are not available, and advocates within the community may be equally rare. Finally, competing priorities may obscure the instructional needs of this particular group of children who, on the surface, fare well within the educational program. These are familiar challenges for those who seek to develop and sustain essential provisions for gifted students residing in rural communities.

Educators in rural schools once again are called upon to negotiate these hurdles, on this occasion, for gifted children. The task is complex, for schools vary not only in their capacity to respond to the needs of gifted children, but also in their commitment to serve them. Thus, standard procedures simply do not exist. Nor, perhaps, should standard programs for gifted children exist. Rather, a foundation for program efforts must be developed, one which acknowledges diversity among rural schools and which respects the capacity of their staff to innovate and use existing community resources. Factors which enhance program success in rural communities include commitments to community awareness and participation, to inservice training for regular school personnel, and to appropriate staffing. These important considerations have been discussed elsewhere (Gear, 1978).

This article seeks to examine broader issues surrounding educational programming for the gifted, issues involving identification and serv-

ices which have direct relevance to programming in rural schools. An underlying premise is the nature of gifted children who attend rural schools: these children are first children, not vastly different from other gifted children. And, like all other gifted children, their needs are diverse. Thus, a listing of rural gifted characteristics is unnecessary. What is necessary is an examination of the opportunities which should be made available to encourage the full development of their intellectual and artistic talents. The intent of this article is to offer an assortment-of-services model as a practical approach for responding to the diverse needs of gifted children within the constraints often encountered in rural schools.

FROM LABELING TO DEFINING NEEDS

The first issue which must be confronted is labeling. Labeling creates problems for all children who may be asked to live up or down to the expectations associated with the assigned label. For many, "gifted" conjures unreasonable expectations. Children report that it is unfair to expect them to be "smarter" and always correct. Parents expect them to be organized and responsible, and teachers expect them to make straight As and to be grateful for their increased responsibilities. The issue is not labeling per se. Certainly labels have been useful in organizing advocate groups, securing funds, and communicating, in general terms, the nature and educational needs of gifted children. Beyond this, however, the label has little instructional usefulness.

A more insidious problem occurs when individuals attempt to organize a curriculum suited for the "gifted" as a group, or when the label interferes with the uniqueness of the child. For example, one child is reflective, needing time to explore, to contemplate, and to collect his thoughts. His current abiding interests are the related consequences of technological advances in prolonging life. Another child, with comparable ability in abstract reasoning, is a social historian. She has already recorded the history of her small community and is now attempting to study the impact of the adjacent metropolis upon the hamlet. A third child, once again with comparable general ability, simply does not sense any value in attending school. Few teachers are satisfied that he can read adequately or communicate his thoughts effectively. His world is largely full of fantasy and images of the future. He feels fettered by this senseless "preparation for life" called school. Thus, children with comparable IQs are quite different in their educational needs; labeling often obscures this phenomenon.

Rural schools must resist the temptation of expeditiously assigning a program based upon the label, which is largely derived from an IQ score. While this advice may be valid for all schools, it is especially pertinent for schools in which few gifted children may be enrolled and for those in which staff and other resources must be carefully allocated. In rural schools, sorting children into "gifted" groups is usually not feasible. More importantly, sorting children in this manner is programmatically unsound; one program will not satisfy the collective needs of all. Provisions for these children should be based on documented needs—needs which vary greatly among children and which emerge as these children mature. Thus, the emphasis must shift away from *sorting* children and toward *defining* children's instructional needs. This conceptual shift has significant implications for program planning within the general school curriculum.

FROM BROADENED DEFINITION TO BROADENED ASSESSMENT

Identification procedures in rural schools are not vastly different from those in other areas. All too often children are tested and labeled according to a single criterion: their scores on an IQ test. Their special abilities, interests, and needs are seldom described, even though these assessments would ensure appropriate educational planning. Thus, a critical need exists for a broadened concept of *assessment* rather than the often cited need for a broadened concept of giftedness.

It seems desirable to move toward a definition with educational implications, to institute a method to locate children who require specialized instruction and related services. Perhaps educators will, in order to provide a challenging and meaningful school experience for each child, fully accept that these decisions are, as they should be, judgmental, based on an appraisal of the child's special learning needs. The intent should be to provide necessary services, not to award membership in a group called "gifted," and certainly not to imply that these children will be our nation's leaders, inventors, and statesmen, though they might

be. By using an educational or diagnostic approach, attention is focused on the educational needs of the individual child. This is a legitimate activity for the gifted child, as it is for all children. This emphasis is critical within rural schools since gifted children may be sparsely located across great distances. Defining the individual child's special education requirements will allow each school to enhance existing services and/or to develop a variety of services which may be made available in accordance with individual needs.

FROM A SORTING SERVICE TO AN ASSORTMENT OF SERVICES

Conceptually, the move should be toward an elaborate support system sponsoring talent development among a variety of gifted children—from a *sorting service* to an assortment of services for children who require adjustments to the regular school curricula. Philosophically, these services would not be reserved for children who fortuitously exceed the arbitrarily selected criterion score of 130 on an individual intelligence test or for a cluster of children defined by a Venn diagram intersection of traits as society's potential contributors. Rather, the community and its schools are viewed in this design as a rich storehouse of potential learning experiences. The goal of leaders within the community and its educational institutions must be to tap those resources which may benefit the cognitive and affective growth of individual children.

For years, educators have made comparisons among various administrative designs of programs for the gifted. The results have been generally conflicting. Contradictory findings may be explained by the appearance of a common denominator among successful programs: the provision of individual encouragement and opportunity for self-paced study in a wide variety of topics. Not surprisingly, the best program appears to be one suited to the child's abilities, interests, and needs; one which provides curricular challenge, encouragement, and an opportunity to develop individual potential. This assumption is based on Pressey's earlier findings (1955) regarding the preponderance of musical talent a century ago in Europe. The lasting impact of encouragement was confirmed repeatedly in biographies and autobiographies of notable leaders, scientists, and artists. Wolfle (1960), who "inventoried" talent in the 1950s, speculated, "There must be many other eminent men and women who could tell similar stories: whose sights were lifted by a teacher or an older friend who took the trouble to encourage talent" (p. 537).

This nurturant force is elusive. It cannot be packaged into curriculum units and has no assigned cell in a three-dimensional model, yet humans thrive on it. The nurturant force of encouragement seems to foster a positive self-concept, a trait too powerful to underestimate and one associated with characteristics of successful students and adults. It is this force which must be the mainstay for rural programs. Anything less may represent shallow activities, not lasting experiences to which many gifted adults attribute their success.

A successful program, therefore, encompasses the school and the community cooperatively devoted to releasing a richness of resources, thereby "lifting the sights" of capable children and youth. Rural schools must extend their capacity to respond to the individual needs of children who may benefit from specialized or advanced instruction. Appropriate modifications to existing school practices do not necessarily entail a search for new and "differential" methods.

First, existing practices which accommodate the needs of gifted children should be identified. Second, existing programs, which could, with slight modification, accommodate instructional needs of gifted children, should be studied and perceived as options. Third, the school should explore suggested programs or administrative procedures which could be developed to extend the capacity of the school to respond to individual differences.

Using existing resources and developing numerous options within the context of the general education program are realistic objectives within reach of all rural schools. In this manner, programming in rural schools will not only reflect efficacy studies in gifted child education, but will also demonstrate that adopting an assortment-of-services approach suits the unique constraints which often exist. Moreover, numerous provisions enable schools to respond to the diverse needs of individual gifted children as these needs emerge. Most importantly, provisions for gifted children will not be viewed as an appendage or as "icing on the cake" for a select few, but, rather as a commitment to respond to the educational needs of children.

The options within an *assortment-of-services model* may include any of the following:

Advanced Placement Classes

In contrast to traditional honors programs, these offer the provision of college level courses, under the auspices of the College Entrance Examination Board, to able high school students while those students are still in high school. Thus, they allow the student possible advanced placement in college on the basis of a qualifying AP examination. Correspondence courses may also be pursued.

Cooperative Programs With Higher Education

Junior and senior colleges may make special provisions for dual high school and college programs. For children who have exhausted the in-grade curriculum, advanced instruction may be made available for high school or college credit.

Early Admission

This requires the administrative provision of the option of early admittance of a precocious child to first grade, thus circumventing the strict letter of the law when exceptional ability requires exceptional educational responses.

Curricular Compression

This option is preferable to the previous practice of grade skipping. For example, it allows the student to accomplish the curricula offered in a three-year period within a two-year span. Thus, a student might successfully complete grades 1–3, 4–6 or 6–8 in two years.

Work-study Programs

These provide a potential resource for academic and career development of gifted students. When these programs have been specifically tailored to meet the needs of gifted students, they have often been "executive internships" within the business world. Nevertheless, a school system does not have to offer an executive internship program *per se* in order to expand vocational work-study programs to encompass areas of interest to gifted students. Critique of a semester experience during a teacher-supervised cumulative seminar might offer constructive student evaluation of the work-study program. Cooperative programs with vocational and business education also may be explored.

Supervised Research Projects

One means of allowing the gifted student to delve into a subject in depth might be offered by projects of this sort in lieu of regular class curricula. If the student demonstrates initial mastery of the subject, or if he accomplishes portions unmastered within a few weeks, this could be an option. Appropriate guidelines necessary to establish relevance to the intellectual abilities of gifted students might include these criteria: statement of an initial hypothesis; design of an investigative technique appropriate to the particular discipline; use of a variety of resources, including library sources, available professionals, and material resources; and personal evaluation of the experience when complete.

Out-of-level Texts

In lieu of or as supplements to the texts regularly provided to grade level students, out-of-level texts may be used. Gifted children who demonstrate mastery of required curricula, express a desire for primary rather than for secondary sources, or require the challenge of a reading level more suited to their abilities should be provided with appropriate curricular resources.

Adjustments to Assignments and Course Requirements

These are essential to individual educational planning for gifted students. If diagnostic testing reveals attainment of basic curricular objectives, mastery testing should encompass levels of cognitive functioning other than rote memory and comprehension. The design of questions which require analysis, application, synthesis, and evaluation necessitates additional, but unavoidable, planning on the part of educational personnel if exceptional abilities are to be properly challenged.

Individual and Group Counseling

Counseling experiences must be provided for

gifted children and for their parents. As noted earlier, the impact of labeling is a phenomenon which may accompany special provisions. Thus, the recognition and encouragement of exceptional abilities needs to be explored in a candid, yet supportive, atmosphere. Additionally, appropriate topics for individual and small group counseling with gifted students and their parents might include psychological learning theory, social-personal relationships, and career guidance.

Special Seminars

Offered by interested school personnel during the school day, these have the potential for extraordinary curricular appeal. Seminars on controversial issues, for example, provide the opportunity for exploration of contemporary concerns through an interdisciplinary approach. A series of leadership colloquia might focus on development of skills and attitudes deemed essential for effective leadership. Other opportunities of this nature may be provided through cable or public service television.

Accelerated Classes

Specialized, fast-paced study should be available for students whose special academic aptitudes necessitate curricular modification too extensive for the regular classroom teacher. Junior and senior colleges may provide the staffing or may provide assistance to the school staff.

Mentor Arrangements

These may be provided for students who evidence a desire for structured experiences with a professional in a field of career interest. Mentors must be carefully selected so that the arrangement is mutually comfortable, providing an appropriate role model for the student and a satisfying sharing of experience for the mentor.

Ultimately, successful orchestration of an *assortment of services* to benefit individual students may be shared by school personnel and by the cooperating agencies and individuals within the rural community. The numerous alternatives described above offer potential for responding to the range of differences noted in the variety of needs, abilities, and interests among the population of gifted children. Moreover, they enable the involvement of youngsters with special aptitudes and special interests who may not otherwise be eligible for gifted programs. Thus, the regular curriculum, as defined by each school, will have carefully integrated numerous opportunities for advanced study, exploratory activities, and opportunities to share experiences with individuals of similar interests and aptitudes. The selection of appropriate opportunities will be based upon an appraisal of the individual child's educational needs.

TEACHER ROLE CHANGES

These changes will necessitate role changes for both regular and special education personnel. Limited staffing may require the classroom teacher and specialist to accept additional roles. Both are expected to be excellent teachers, proficient in several academic disciplines, and they must assume greater responsibility. Together they organize vital resources, work with significant leaders within the community and its schools to plan for comprehensive program development, and monitor the progress of gifted children in their academic and social development. Finally, these teachers are involved in making the curricular adjustments required within the regular classroom for gifted children. Collaboration of all school personnel on behalf of gifted children will assure a comprehensive program. Community members and school personnel may share in the success of talent development.

While resources may be limited and the teacher is called upon to assume many additional responsibilities, the one responsibility which should remain foremost is the caring relationship which he or she establishes with the child. Teachers in the rural school should never underestimate the importance or the power of their relationship with children. More than anything else, gifted children in rural areas need excellent role models. They need someone to believe in them and to encourage them to develop their special skills and explore their interests. They need guidance, not from someone who seeks to "save" them from their rural confinement, but from someone who respects them as well as the community in which they reside. The mission, then, is to respond to the child's individual needs within the context of the community. Respect for their abilities, concern for their

interests, and a desire to respond to their needs are crucial variables, unaffected by geography or finances. Teachers should endeavor to develop their capacity to nurture the talents of gifted children, mindful of their role as significant adults in the lives of gifted children.

In rural schools there should be a concern for responding to the educational needs of children. We share this responsibility for all children, and we expect to do no less for the gifted child. It is the duty of the educational system to respond to the rights of the child as appropriately, yet as inconspicuously, as possible. Margaret Mead (1954) eloquently described the nature of this response for gifted children:

> But most of all, more than protection from active discouragement, much more than rewards and praise, the gifted child needs scope, material on which his imagination can feed, and opportunities to exercise it. He needs inconspicuous access to books, museums, instruments, paints, ideas, a chance to feed himself with the accumulated heritage from the genius of other ages. (p. 214)

An emphasis upon broadened assessment and means of providing for gifted children will enable rural schools to respond to the individual needs of gifted children. Rather than the provision of a single "gifted program" reserved for singly determined "gifted" children, there should be numerous services and resources offered within the community and its schools. Specialized instruction for gifted children should exist within the total school curricula, and those students who participate should do so because it is suited to their unique interests and abilities. Thus, curricula will be provided because the experience is a challenge, not a reward for being "gifted." Furthermore, appropriate curricular experiences are available to all who benefit from participation; consequently, the regular curriculum is broadened and adjusted, and specialized instruction is also available.

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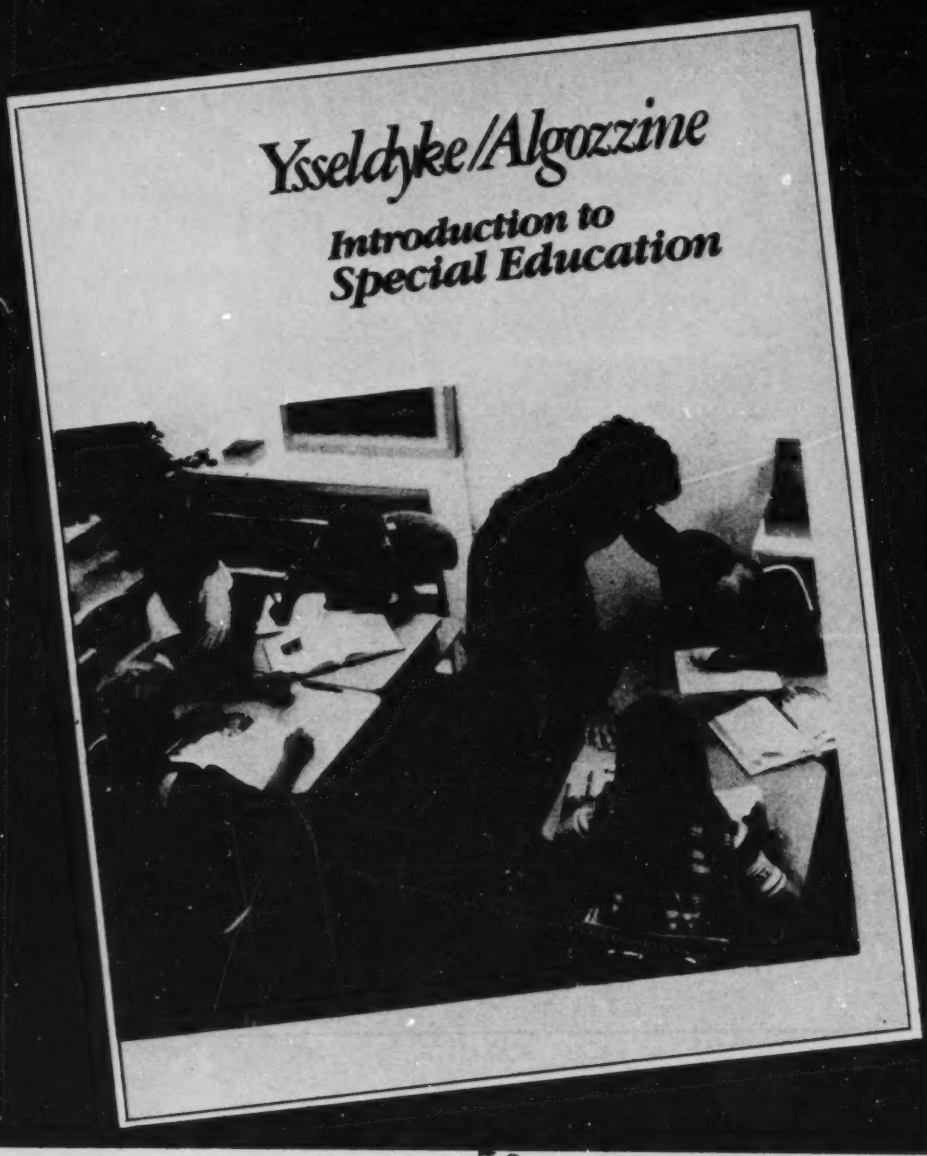

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A Bandwagon Without Music: Preparing Rural Special Educators

LAWRENCE W. MARRS

Abstract: The bandwagon has finally reached rural America. This article discusses important considerations for those who would board this bandwagon carrying baggage which includes preconceived ideas about using traditional special education programs to prepare special educators for rural areas. Competencies and curriculum elements which should be included in preservice programs are discussed.

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■ Universities and colleges are preparing three kinds of people to teach in rural special education programs. The first type of special educator grew up in rural communities, knows the cultures and communication systems, and is comfortable in both the social and professional rural milieu. This person is eager to become a rural special educator for the duration of his or her career and is not likely to move.

The second type of person who accepts a teaching position in rural areas is place-bound. This person wants or needs to live in a specific area and is forced into teaching special education by circumstances. There may be no positions available other than special education, or a special education position may be all that is offered. Frequently, this person is not even certified in special education and must receive either emergency or temporary certification from the state department of education. There are vastly disproportionate numbers of such temporarily certified special educators in rural areas as compared to the number of such personnel in urban areas. Even in the mid-1980's there are many rural "special educators" teaching children because they opted for that instead of becoming a bus driver, cafeteria worker, or school custodian (Helge, 1983b).

The third type of special educator accepting positions in rural areas knows nothing about ruralness, comes from an urban teacher education program, and is merely biding time until a job becomes available in an urban school system. Because these teachers have not been prepared for a rural life (Helge, 1981; Muse, 1980; Young, 1981), they experience rural culture shock. This third group primarily constitutes the huge turnover reported among rural special educators, where attrition rates of 30% to 50% are the norm (Helge, 1983b).

Difficulties in staff recruitment and retention relate directly to deficiencies in personnel

preparation programs. We are simply not preparing a sufficient number of qualified personnel for rural special education programs. More importantly, teacher preparation programs are not providing their students or trainees with appropriate instruction to ensure their success and survival as rural special educators.

A U.S. Special Education Programs (SEP) Briefing Paper (Sontag & Button, 1980) stated that although SEP has invested time and money to address shortages of other special education personnel, rural personnel shortages are most acute because "we have not prepared special education personnel who are able to adjust to the demands of remote, isolated, or culturally distinct rural areas." This statement was later verified by Smith and Burke (in press), who reported that interviews with state education agency directors of special education determined that universities were not preparing special education personnel in socialization of work in rural communities.

ALL ABOARD

Numerous universities and colleges with large special education teacher preparation programs, upon hearing of the numbers of teachers needed in rural areas, leaped onto the rural special educator preparation bandwagon. Most of their results were less than effective. They did not develop anything particularly new, and graduates of these programs would feel equally competent (or more so) to function in urban areas. Their graduates agreed to spend brief periods of time teaching in rural programs while awaiting more affluent and prestigious positions in urban and metropolitan areas, and these new educators were basically untrained to deal with rural subcultures. Some educators at larger institutions began to analyze the rural experience, translate it into curriculum and policy, and write about "rural special education" in books and grant applications.

State education agencies are attempting to alleviate personnel shortages and attrition through such strategies as providing educational incentives to practicing teachers. One example of this is in Kentucky where the state department of education pays the educational expenses for practicing teachers to take courses required for certification in areas of need identified by the state. Other states and communities offer salary supplements to special educators to entice them to accept rural special education positions.

One strategy employed by most school systems in nearly all states is the issuance of emergency or temporary certificates. Relatively high percentages of the rural special education directors and teachers interviewed by the NRP (Helge, 1983a) reported a lack of training for their positions. For example, 15% of the rural special education directors and teachers had taken few or no courses in special education. Sixty-six percent of those surveyed reported that emergency certification is typically used in their districts. They stated that temporarily certified personnel were not qualified for the positions they held.

Many small and regional institutions have gotten on the bandwagon (and rightfully so) since most of their graduates are placed in rural settings. In December 1982, at the project director's meeting called by SEP and held in Washington, D.C., a National Consortium of Universities Preparing Rural Special Educators was formed. The Consortium was initially composed of representatives from some 47 universities. They agreed to participate, or be involved in some level, in the development of curriculum designed specifically for rural preservice programs.

Consortium members were invited to join at one of three levels ranging from being on a mailing list to receive newsletters and other news items, to participating in teleconferences and resource sharing or actually assisting in the development and field testing of curricula. Most institutions opted to participate in the curriculum design and implementation aspect of the Consortium. Subsequently, over 20 additional institutions indicated a desire to participate and are now members of the Consortium.

A subgroup within the Teacher Education Division of CEC, the Small College Caucus, was also formed to provide a forum for sharing resources and technical skills among members. While not all small colleges prepare special educators for rural areas, most special educators going to rural areas are trained in small colleges.

Another group of players on the bandwagon comes from 37 universities and colleges across the country which agreed to field-test preservice curriculum modules developed by the National Rural Project as a result of 3½ years of research and program design. These participating institutions are modifying the curriculum

modules to suit their needs and recording the modifications via cassette tape logs. These logs will be reviewed, along with any written materials added to the modules. The final product of these modules will be available from the National Rural Project at Murray State University, for use by institutions across the country. Since a wide diversity of universities and colleges are using the materials, it is expected that modules will be developed to fit most settings, regardless of the constituency base of the teacher education program. (The competencies upon which these instructional modules were developed are discussed later in this article.)

SOME AUDIENCE REQUESTS OF THE BANDWAGON

The 1983 National Rural Project survey (Helge, 1983b) of 200 rural special education directors and teachers in all 50 states concluded that being trained in a rural or regional college or university site did not guarantee a rural training emphasis. In fact, 100% of those interviewed stated that their "rural training" took place on the job. In that same study, 32% of the respondents could not state a strength of their preservice training as preparation for working with rural handicapped children, their parents, and rural communities. In contrast, 62% noted the lack of realistic experiences in a rural community as a significant void in their training program.

TABLE 1
What Additional Training Do You Wish You Had Received But Did Not?

Training	*Response*
Experiential training (including on-site work, simulations of problem-solving, team management, communication, etc.)	59%
Additional knowledge (coordination of services, regional delivery systems, team management, school law, finance, and itinerant service strategies)	57%
Generic techniques to be able to work without the availability of specialists for low-incidence handicaps	48%
Knowledge of rural cultures, mores, and techniques for acceptance	36%
Recruitment and retention techniques	31%
Transportation alternatives	24%
Serving minority students in rural areas	3%
Learning disabilities information	1%

The 1983 study indicated that preservice preparation for rural special educators must become more specific, with rural-focused content and experiential training techniques. None of the 200 respondents in the telephone survey stated that they were trained specifically for work with rural handicapped students. In fact, only 10% described their preservice training as adequate to work in rural communities. Tables 1 and 2 summarize their answers to two pertinent questions related to preparation for teaching in a rural setting.

It is clear that rural special education preparation programs need to focus more on "ruralness" than they have been doing. Few respondents to any of the National Rural Project research inquiries indicated a need for more instruction in curriculum, methods, or characteristics of handicapped children. Rather, for successful survival in rural areas, special educators need to know how to adapt and adjust, both personally and professionally, to the rural culture in which they find themselves employed. More people leave special education positions in rural areas because of social and professional growth limitations than do so because of incompetence (Helge, 1981).

PROBLEMS FOR MEMBERS OF THE BAND

Most rural or regional universities and colleges preparing their students for special education positions use essentially the same curricula as do their colleagues in urban institutions of higher education. Yet they encounter a number of unique problems.

- There are limitations in the quantity and quality of role models, materials, and facilities in many of the rural settings in which practica and student teaching must be arranged. The need to expose students to quality, innovative, state-of-the-art learning situations is mediated by what is usually present in available practica and internship locations

TABLE 2
What Do You Wish You Had Known About Working in a Rural Community Before You Began Doing So?

Knowledge	*Response*
Coping with remoteness to services and other resources	68%
Techniques for generic service delivery serving children without the availability of specialists	66%
Coping with remoteness from personal enrichment and stress reduction activities	56%
How to work with rural families and communities	38%
Information regarding rural subcultures	38%
Recruitment and retention strategies	21%
Transportation constraints (personal and professional)	21%
Dealing with transient populations	11%
Respondent was from the type of rural area in which he or she eventually became employed	24%

and somewhat by the need to inject reality into the curricula.

- Adequate numbers of practicum sites and the ability to transport students to them is frequently a problem.
- Student housing in off-university practicum locations requires extensive logistics and community/university cooperation.
- The problems of supervision are great, including the cost of travel and housing and the cost effectiveness of supervising one or two students per community.
- Since practicum, observation, and student teaching locations are typically spread over a wide geographic area, climatic variables enter into the design of curriculum as well.
- Many smaller institutions offer courses dealing with low-incidence handicaps in only a cursory manner unless a particular faculty member happens to have such an expertise and interest.
- Most faculty members in smaller universities have multiple responsibilities, including 12-hour teaching loads, supervision, and travel, along with traditional services to the field and research requirements. Therefore, there is typically little time for development of new curriculum materials.
- Many rural and regional institutions use adjunct instructors to help them meet the tremendous needs of rural communities for teacher preparation. Most of these adjunct personnel live within the communities in which they teach and their courses are rarely supervised or quality controlled by the parent institution.

Faculty in regional universities and colleges who train rural special educators have a strong commitment to quality. Quality, however, is sometimes difficult to achieve because of workloads, diverse responsibilities, funding problems, and isolated facilities. Additionally, curricula have not been developed specifically for the preparation of rural special educators. Curricula tend to look alike regardless of whether the students intend to seek employment in rural or urban settings.

There is a need for development of a rural preservice curriculum that is field tested and validated. Such a curriculum is in fact being developed by the National Rural Project under a grant from SEP, one which will be transportable and usable in most university and college settings across the country in which rural special educators are prepared.

SOME MUSIC FOR THE BANDWAGON

Studies conducted by the National Rural Project over the past four years point to a number of areas of critical need in relation to rural teacher preparation. They include the following: severely handicapped and other low-incidence handicaps; rural independent living skills; technology in rural schools; populations over 17 years; rural early childhood; rural special education administration; rural secondary special education; related services in rural schools; rural vocational education; rural vocational rehabilitation; rural community mobilization; rural speech therapists; rural generic special education; and rural special education teachers for emotionally disturbed, learning disabled, and educable mentally handicapped children.

Ten curriculum modules developed by the National Rural Project are being field-tested in 1983–84. They include:

1. Personal Development Skills and Strategies for Effective Survival as a Rural Special Educator
2. The State-of-the-Art of Rural Special Education
3. Alternative Instructional Arrangements and Delivery Systems for Low-Incidence Handicapped Students in Rural America
4. Involving Citizens and Agencies of Rural Communities in Cooperative Programming for Handicapped Students
5. Working with Parents of Handicapped Students
6. Solving Rural Parent-Professional Related Dilemmas
7. Working with Peer Professionals in Rural Environments
8. Creative Resource Identification for Providing Services to Rural Handicapped Students
9. Solving Educational Dilemmas Related to School Administration
10. Warren Springs, Mesa. A Rural Preservice Simulation for Use With NRP-Developed Rural Preservice Modules

These modules are based on competencies which are designed for infusion into ongoing special education programs. They are not intended to replace curricula in methods, characteristics of handicapped children, etc. Rather, their infusion into ongoing programs and existing classes will enhance the probability of their use without adding extra instructional burden to already overworked university and college faculty. The nine competencies on which these curriculum modules are based are listed below (Helge, 1983a):

1. Students will demonstrate an understanding of the context of a rural school and its environment.
2. Students will demonstrate an understanding of differences involved in serving handicapped students in rural and urban environments.
3. Students will demonstrate knowledge concerning the state-of-the-art of rural special education.
4. Student will demonstrate knowledge of effective service delivery models for rural handicapped children (including low-incidence handicaps such as severely emotionally disturbed, hearing impaired, and visually impaired).
5. Students will demonstrate an awareness of alternate resources to provide services to rural handicapped students and skills to identify alternate resources.
6. Students will demonstrate skills in working with parents of rural handicapped students.
7. Students will develop skills in working with citizens and agencies in rural communities to facilitate cooperation among schools and service agencies to serve handicapped students.
8. Students will demonstrate an understanding of personal development skills (a) for their own professional growth and (b) to build a local support system in their rural environment.
9. Students will develop skills in working with peer professionals from rural environments.

SOME BELLS AND WHISTLES

The National Consortium of Universities Preparing Rural Special Educators will develop preservice curriculum modules based on curriculum elements identified as important within the nine identified competencies. Examples of these curriculum elements are listed below under the specific competency category to which they apply.

The Rural Special Education Context

1. Differences in rural and urban schools and communities
2. Ruralness defined
3. Inequities of ruralness
4. Heterogeneity of ruralness—types of rural subcultures
5. Historical overview of rural education
6. Advantages and disadvantages of rural schools
7. Community services in rural America
8. Effects of federal mandates for rural communities
9. Current controversies
10. International similarities in problems and strategies of rural service delivery systems
11. Misapplication of urban service delivery models

12. Associated cost problems
13. Personnel needs and roles
14. Affective factors
15. Rural minorities
16. Effective processes of creating change in rural communities
17. Rural community norms
18. Communication systems in rural communities
19. Power systems in rural America
20. Fiscal realities of rural schools/departments/class budgets

Differences in Serving Rural Vs. Urban Handicapped Students

1. Percentages of school population served
2. Personnel turnover
3. Transportation
4. Community structure
5. Geography
6. Backlogs of children for testing and placement
7. Communication
8. Student body composition
9. Education professionals approach
10. Population density
11. Nonenrollment of school-age children
12. Cooperation among agencies
13. Roles/lack of specialists

The State-of-the-Art of Rural Special Education

1. Problems serving rural handicapped children
2. Inherent rural attributes and resources for effective service delivery systems
3. Perceptions of parents of handicapped children about rural services delivered
4. Changes in rural attitudinal factors
5. Viewing problems as challenges and rural attributes as positive vehicles for change

Effective Service Delivery Systems

1. Service delivery variables
2. District variables
3. Community variables
4. Importance of generic skills for special education personnel
5. Alternate instructional arrangements and delivery systems
6. Generic effective strategies and promising practices for individualizing service delivery strategies for specific rural subcultures
7. Building personal and professional support systems
8. Understanding federal and state mandates regarding special rural populations (e.g., migrant tracking system, health records, federal and state mandates, and linkage systems)

Creative Resource Identification

1. Funding alternatives
2. Rural parents as resources
3. Rural communities as resources
4. Facilitating interagency cooperation so services will be provided to rural handicapped children
5. Advocacy groups—national, regional, state
6. Skills in preparing proposals for principals and school boards to improve services
7. Staff development resources—cassette tapes for traveling, satellite, videotaping
8. Managing noncertified aides assigned to assist in special education classes

Working With Parents

1. Understanding rural parents
2. Establishing rapport
3. Effective parent-professional communication
4. Assessing parent needs and planning intervention programs
5. Working with extended families
6. Designing parent education systems
7. Serving as a parent advocate
8. Using parent and community resources in the schools

Facilitating Interagency Cooperation

1. Establishing rapport
2. Understanding issues and processes of interagency cooperation
3. Understanding communication and power

systems
4. Influencing decision makers
5. Establishing community education systems

Personal Coping Skills and Professional Development

1. Laboratory problem-solving skills—improved and decision making
2. Effective assertiveness for handicapped children
3. Self-reliance vs. referral to specialists
4. Knowing the limits of one's own knowledge
5. Being able to ask for assistance from supervisor/department chair/neighboring district, etc.
6. Learning to find positives in what is different and challenges in problems
7. Building support systems and mentors in atypical places for rural special needs children (e.g., district psychologist, nurse, librarian, PTA officer, parents)
8. Prioritizing and finding agencies for self and professional development to prevent burnout
9. Keeping abreast of new developments
10. Influencing decision makers
11. Recognizing stress
12. Stress management and reduction
13. Alternate leisure activities/self-entertainment for isolated areas
14. Developing annotated bibliographies of resources (human, conceptual, technical, media, and materials)
15. Comfort with the facilitator-vs.-expert role
16. Rural leadership skills
17. Maintaining community support
18. Accepting the rural community and becoming involved in its affairs
19. Prioritizing one's energy for teaching vs. battles over community norms
20. Effecting peaceful progressive relationships among factors
21. Socially acceptable behavior in rural cultures/personal profiles, to include acceptance of different cultures, norms, and values
22. Being an effective parent advocate
23. Developing abilities to teach independently and maintain classroom discipline without supervision

Consultation with Rural Peer Professionals

1. Understanding communication processes
2. Demonstrating a general understanding of procedures involved in consultation and problem-solving

Rural Resources

A multitude of resources are available in rural areas. Preservice and inservice programs designed to provide rural special educators should provide instruction in how to take advantage of these resources. Some examples of those that are accessible include the following:

A positive sense of community means that rural citizens are quick to come to the aid of their neighbors and can be mobilized to assist special educators in a variety of ways ranging from the contribution of individual skills to financial resources.

There are strong accountability networks in rural areas resulting from the basic fact that "everybody knows everybody." Therefore, things usually get done when promised, and negative situations are not allowed to get out of hand.

While there is some bureaucracy in rural areas, the informal political and communication systems are open to nearly everyone and provide special educators with vehicles for enhancing system-wide change.

Since most professionals in rural communities know each other and generally deal with the same constituency, rural special educators have easier access to a wide range of nonschool services.

Rural communities have personalities, attitudes, and values. Once the special educator uses his or her knowledge for discovering these basic tenets of a given rural community, procedures for improving or changing special education delivery systems begin to become clear.

Since the majority of parents of handicapped children in rural areas will know each other, they can be mobilized. Through their own

networks of friends and relatives, they can wield considerable weight in the best interest of the special education program.

These bells and whistles have been provided to encourage university and college faculty who prepare rural special educators to consider adopting a rural focus in their courses. Implementation of these suggestions will provide students with unique knowledge needed to survive successfully in a rural school setting.

THE GRAND FINALE

The thesis of this article is that *personnel specifically trained to work with rural handicapped populations will have greater personal as well as professional success.* The 1980 SEP briefing paper stressed the importance of designing strategies to address critical personnel shortages in rural America. Such strategies must use existing facilities and resources, be consistent with certification guidelines for those to be trained, and include a substantial amount of training and integration with practicum experience.

Curricula developed to prepare rural special educators should observe the following guidelines:

1. Quality preservice models must provide for the training of competent special educators possessing appropriate skills to work with rural handicapped students.
2. Personnel must be trained to work with various categories of handicapping conditions including low-incidence handicaps. This training must include attention to the concepts and skills covered in the described competencies and curriculum elements as well as more traditional curricula.
3. Quality curriculum content should be data-based. Research concerning national and local cultural needs of rural areas should be incorporated into the design of training competencies and content. Content should include knowledge based on comprehensive literature reviews, recent site visits, and other contacts with local district and cooperative programs to determine effective and ineffective strategies of serving rural handicapped children.
4. Because of scarce professional resources in rural America, training programs should teach students to use existing resources. Cost analysis data should be incorporated into program design whenever possible.
5. Lasting change in rural areas cannot be accomplished unless change models are consistent with local community culture and value systems. Training curricula should teach students about local community systems and encourage understanding of models of service delivery which are consistent with local community values.
6. Training curricula must be designed with consideration for local community value systems. Students must be trained in alternative ways to adapt teaching techniques for specific rural community characteristics.
7. Rural special educators must work with a variety of handicapping conditions and play an assortment of roles in the community. Training should prepare special educators for a variety of leadership, service, and support roles.
8. Preservice curricula should stress flexible usage of instructional strategies. This will encourage more flexibility for faculty attempting to incorporate rural content into existing courses.
9. Training strategies must provide for procedures to follow-up classroom training in actual teaching environments. This should include practica, internships, and job placements. Field personnel should be involved in analysis of the skills of students trained by the curricula.
10. Training models should incorporate interdisciplinary training and be designed to prepare special educators to work with handicapped children in the 11,000 rural districts in America.
11. Innovations in technology should be used wherever feasible for enhancement of cost-effective personnel preparation. Also, the use of technology as a resource for special educators in rural areas should be taught as part of the preservice curriculum.
12. Research into topics and issues of concern in rural special education by university graduate students and faculty should be encouraged. Research findings should be disseminated to practitioners as well as preservice university faculty.

AN ENCORE

New curricula must be developed and used in the preparation of rural special educators. Traditional curriculum sequences (characteristics of handicapped children, methods, curriculum development, practicum, and student teaching) have not provided enough of what is really important for success in rural special education settings.

Even though members of the band from across the land may differ in harmony, it is imperative that all players use music ("curricula") that is needed and desired by those who must dance to the tune of the bandwagon.

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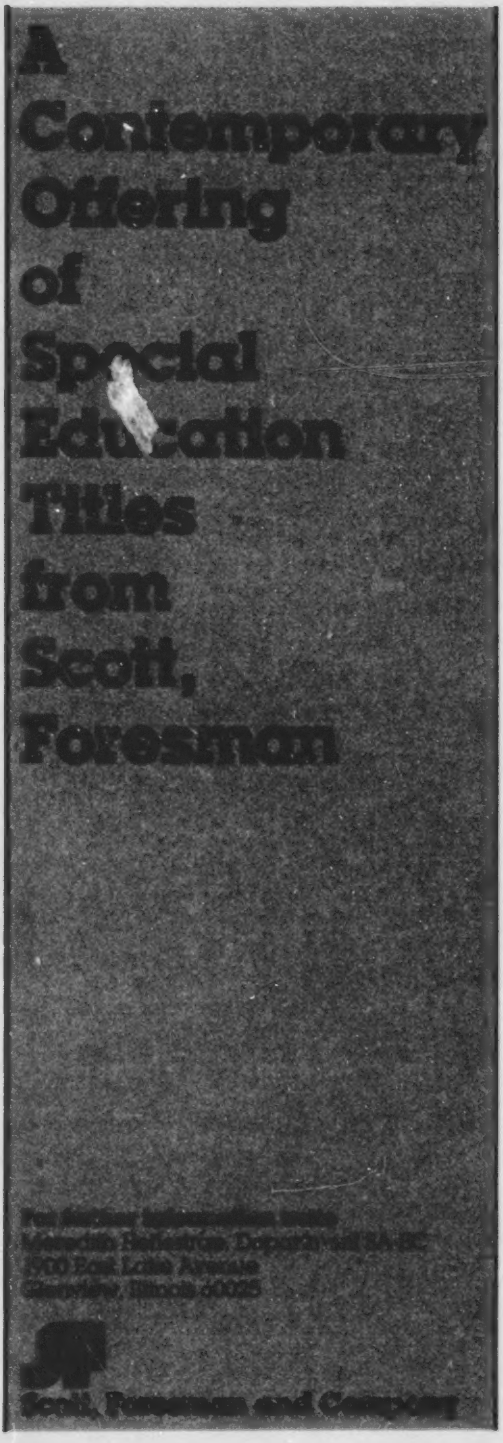

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Technological Tools for Rural Special Education

ALAN M. HOFMEISTER

Abstract: Many of the problems of education relate to communication issues. The developing new technologies offer considerable promise because of their information orientation. The realization of these promises will depend on the degree to which rural educators prepare themselves to capitalize on the advantages and avoid the problems associated with the new technologies. One of the advantages of the new information technologies is the potential to support the concept of "universal excellence" in instructional delivery systems.

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■ The developing technologies associated with the information age hold considerable promise for the rural special educator. There are two major reasons for this optimism. One is concerned with the information orientation of the new technologies, and the second is concerned with the notion of universal excellence.

INFORMATION ORIENTATION

Though it is fashionable to discuss the developing technologies as components of the computer age, the reality is that the umbrella phenomenon is the information age, and the computer the major tool of the information age. This information orientation is particularly important in the context of rural education, where information transmission is central to many of our problems. The instructional and administrative practices that we use in education are based on communication among individuals working in comparatively close contact. Many of these traditional practices are rendered less than effective by the problems of time and distance associated with rural education. The information age offers a set of communication tools that have the potential to overcome some of these problems.

Videotex

Videotex is the term used to describe any system which makes computer-stored information available via computer screens or a printing terminal. Videotex exists in two forms: interactive and noninteractive.

Interactive. In interactive videotex, information usually moves via telephone lines. The user may interact through a personal computer, a terminal with a screen and keyboard, an adapted television set, or a printing terminal. Most interactive videotex systems are designed

to allow the individual to conduct in-depth searches through large amounts of information. The individual can work in either a search mode or an interactive mode in which information can be added to the system as well as retrieved.

One of the most common ways an individual adds information to a videotex system is through the use of *electronic mail*. Electronic mail is the term for the electronic distribution of messages. While most forms of telecommunications are "real-time" communciations, electronic mail is not. Messages are sent and stored until the recipient wishes to read them. This facility combines the advantages of regular mail (allowing the individual to choose when to read or respond) with the speed of electronic communications. Most of the large electronic mail systems allow messages to be copied or sent to several individuals at once. When a message is received, the recipient can often forward it to others with a single copy command.

Electronic mail systems usually include electronic bulletin boards, where messages of general interest can be posted. A number of states have developed statewide videotex systems which include bulletin boards for special educators, school administrators, and curriculum specialists such as math and language arts teachers, as well as general education employment information.

Computer conferencing occurs when several individuals use the electronic mail facilities of a videotex system to communicate on a specific topic over a period of time. For example, several teachers in different parts of a state might conduct a computer conference over a two-week period to develop an agenda for a statewide professional meeting.

Nationally, special educators are participating in interactive videotex systems of three major types. General-purpose systems such as CompuServe and the Source comprise one type. Aside from offering electronic mail services, these systems also provide a large information base that includes access to such wide-ranging information as wire services, stock market, restaurant guides, and transportation schedules, as well as bibliographical search facilities that allow the educator to query such data bases as ERIC.

A second, more specialized system is SpecialNet, which was developed specifically for special educators and provides for electronic mail, bulletin board services, and computer conferencing. A third alternative, just starting to emerge, are state-specific systems developed by state offices of education, designed to serve all public school educators within a particular state.

Noninteractive. Noninteractive videotex is usually transmitted in association with television signals. A television signal that is received in the home is capable of carrying more information than we are presently using. If a modification is made to the television set, additional information can be accessed. One example of this capacity is the captioning service available for the deaf, a noninteractive videotex service.

Noninteractive videotex information bases are usually limited to a few hundred pages of information, and while users can select from among them, they cannot enter information into the system. These noninteractive videotex services often duplicate some of the offerings of the daily newspaper, and carry information that may be updated daily or even more frequently.

The pages of information offered by these noninteractive videotex services are available for purchase in a manner similar to that in which advertising space is sold on television. Thus, it is possible for schools to obtain command of a number of the available videotex information pages in order to keep the community informed on school events and educational offerings.

The Electronic Cottage

Alvin Toffler, in *The Third Wave* (1979), described the "electronic cottage," where all members of the family stay at home and work, learn, and participate in recreation with the aid of computers and electronic communication. The idea of children staying at home and learning through electronic communication is not at all new. In the field of special education, there have been numerous examples of pupils linked to teachers via phone lines. As far back as the 1930s and 1940s, pupils in outback Australia interacted with their teachers by short-wave radio powered by pedal-driven electronic generators.

A number of corporations have experimented with allowing employees to work at home and communicate via computer terminals with

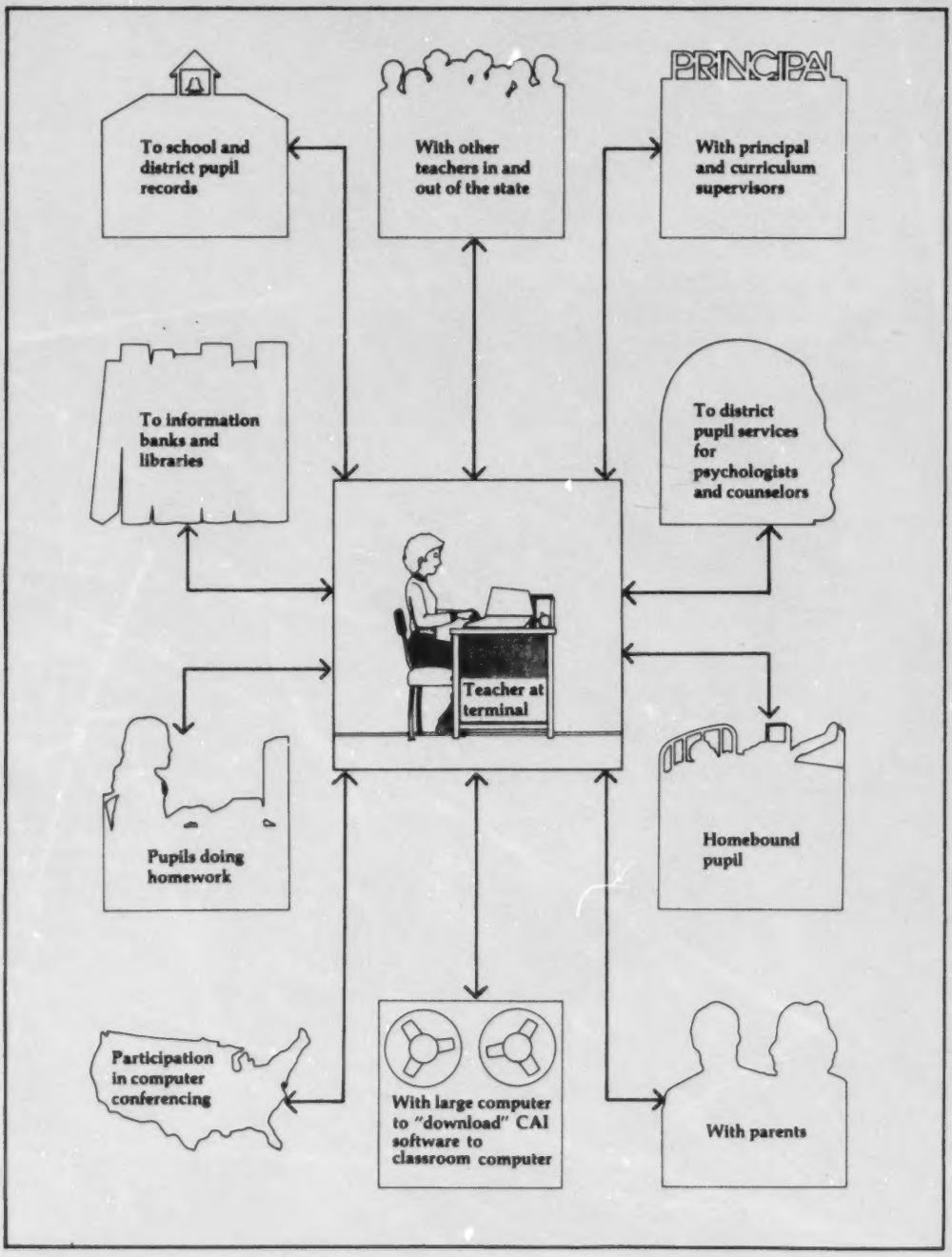
To school and district pupil records
With other teachers in and out of the state
PRINCIPAL
With principal and curriculum supervisors
To information banks and libraries
To district pupil services for psychologists and counselors
Teacher at terminal
Pupils doing homework
Homebound pupil
Participation in computer conferencing
With large computer to "download" CAI software to classroom computer
With parents

FIGURE 1. Electronic information sources for the teacher.

From *Microcomputer Applications in the Classroom* by Alan Hofmeister. Copyright © 1984 by CBS College Publishing. Reprinted by permission of Holt, Rinehart and Winston, CBS College Publishing.

work colleagues. While such practices have been implemented, their popularity with the worker has been questioned. In a poll conducted by *Time* magazine (January 3, 1983), some 73% of the respondents stated that they believed the computer would enable more people to work at home, yet only 31% said that they themselves would prefer to do so.

Electronic Information Sources and the Teacher

When we move from direct contact to electronic communication, we dramatically reduce the impact of time and distance as problem variables. When communication takes place electronically, the important variable becomes terminal access. Once two individuals wishing to communicate have access to a terminal, the distance between them ceases to be of major importance. Figure 1 illustrates some of the electronic information exchanges that presently occur between a classroom teacher and other individuals in the education system.

Problems and Issues

Participating in the technology. All of the electronic information exchanges noted in Figure 1 have either been implemented or are planned for the near future in a number of school districts in the United States. The fact that the potential already exists does not mean that such electronic information exchanges should or will occur in great numbers. While our children appear to be adapting quite readily to the hardware of the information age, many administrators, teachers, and teacher trainers do not share their enthusiasm.

Balance between electronic and personal contact. Electronic information cannot and should not replace all other forms of communication. Even if we were to become highly committed to electronic information exchange, we would have to work at determining an appropriate balance between direct personal contact and contact via electronic information.

Fiscal resources. Even though the communication problems posed by time and distance are minimized by electronic information exchange, limited fiscal resources remain as a persistent problem, particularly in relation to the availability of equipment. If we determine, for example, that those households having ongoing electronic communication with the teacher to exchange information on such issues as homework and pupil progress are in a better position to help their child, then we must become concerned about those families that do not have the financial resources to communicate electronically with the school.

Availability and use. The fact that an electronic communication channel exists does not guarantee its use. For example, even if we develop inexpensive and flexible electronic communication systems between teachers and parents, such systems may be little used if we have not also devised systematic and productive ways of using them. Although the value of parent communication, parent involvement, and parent training are constantly discussed, supported, and validated through research, the fact is that many educators do not systematically plan for or place a high priority on parent-related initiatives, even though some relatively low-cost communication channels are already available, the telephone being a prime example.

UNIVERSAL EXCELLENCE

The notion of universal excellence was a motivation driving many of the early researchers using teaching machines, programmed learning, and computer assisted instruction (CAI). As far back as 1966, in Congressional hearings, advocates of computer assisted instruction discussed the potential of this new tool to "do for every child what once could be done for only a few" (Hofmeister, 1983).

For some twenty years now, CAI researchers have looked to computer assisted instruction as an important vehicle in developing universal excellence in the delivery of instruction. Unfortunately, the notion at this point in time is still more vision than substance. In the spring of 1977, just as the first microcomputers with educational potential were being released, Schoen and Hunt asked,

> What happened? Why has CAI not been adopted wholesale in our educational institutions? Despite fantastic predictions by many people in the 1960's . . . there seems to be little evidence that their predictions will come true in the near future. (p. 73)

Although the portability, cost, and flexibility of the microcomputer have considerably increased the availability of CAI, there are still problems.

Though much is made of the computer's ability to respond to each individual with text, graphics, and now speech, it is possible that these aspects will make a relatively minor contribution to education (Barringer & Gholson, 1979; Rankin & Trepper, 1978). Perhaps the most important characteristic of CAI technology will be the ability to faithfully replicate instruction. One of the greatest disappointments of CAI has been the failure of CAI developers to capitalize on the technology's potential for self-improvement through its ability to collect pupil data and consistently replicate each improved version. The market has been deluged with large numbers of fragmented products, some of which were never even tested in an actual classroom before they were marketed.

An early vision, as expressed by Schwartz and Long (1966), suggested that:

> The data collection and quick update capabilities have profound implications. . . . Once the initial version of the course has been written and administered to a small group of students, the author can interrogate the system and obtain a complete record of each student's performance. From this, he can then determine where changes are necessary. (p. 15)

This vision of nearly 20 years ago has been lost to many CAI program developers.

At the present time there is very little evidence that existing computer assisted instruction programs will make a dramatic addition to our instructional tools (Alderman, Swinton, & Braswell, 1978; Bunderson, 1981; Deaton, 1983; Hartley, 1977). While CAI has often performed acceptably in a supplemental role, its performance as an alternative to the teacher has been considerably less than what was hoped for by many of the earlier advocates of computer assisted instruction.

The "Omnibus Medium"

Kleibacker (1983), in discussing the communication industry, noted:

> Once segmented into separate, distinct entities—newspaper, books, magazines, film, radio, television—each with their own markets, today the technologies are merging into one giant electronic circuit-board. Newspapers are going online. Books are being converted from handbooks and paperbacks into floppy disk "softbacks." Film and records are being digitized and magazines are becoming videoized to fill a supermarket of cable and microwave channels. (p. 1)

Of interest to educators is the convergence of technologies to form a single device with the characteristics of several media. In the Science and Technology section of the April, 1983, issue of the *Economist*, reference was made to the plans of Matsushita to market a "read-and-write" videodisc system. Such a system has the potential to function as a microcomputer, but with a massive increase in speed and storage, and as a videotape system, but with better video and audio characteristics. The read-and-write videodiscs should make available to the CAI developer a hardware device that is a complete generation ahead of present devices.

Videodisc systems that can present video and respond like a computer are being field tested in special education classrooms (Hofmeister & Thorkildsen, 1983). A restriction of present systems is tied to the fact that they are "read-only" systems. The computer code and video information stored on the disc cannot be changed once it is put there. A read-and-write videodisc allows for the changing of both computer and video information. The presence of this "omnibus medium" may bring the dream of universal excellence in instruction a little closer to reality. A highly flexible and responsive delivery system that can present high quality "packaged" instruction and still allow for local adaptations has clear implications for rural special education.

CONCLUSION

The new technological tools offer immediate and more distant promises. The realization of these promises will depend on the degree to which rural educators prepare themselves to capitalize on the advantages and avoid the problems associated with the new technologies. Because these new tools are communication oriented, rural educators have much to gain by developing their technological literacy. Unlike their urban peers, the rural educator does not have the luxury of falling back on existing communication practices in education, many of which have not been well suited to the needs of rural educators.

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Technologies as Rural Special Education Problem-Solvers

DORIS HELGE

Abstract. Advanced technologies are emerging in rural school systems. This article discusses the availability of a variety of new technologies and their primary uses for instructional support, instructional applications, management, and staff development. Problems in initiating new technologies in rural environments and suggestions for using them are discussed. Successful technological models and projected future uses are described.

■ Technologies from microcomputers to satellites are increasingly being used by schools across America. Their values range from global information dissemination systems to tools that facilitate "seeing" by blind students and "hearing" by deaf students.

Modern technology offers particular benefits for rural schools. Many of the most frequently identified rural service delivery problems (e.g., professional isolation and long distances between services and those needing them) can be partially ameliorated by increased use of advanced technologies.

Rural schools have had less access to most forms of educational technology than nonrural schools (McCormick, 1983). The smallest and most isolated rural schools can potentially gain the most from the current technological flurry.

AVAILABILITY AND USE OF EMERGING TECHNOLOGIES

A 1983 National Rural Project study (Helge, 1983) of 200 rural districts/cooperatives representative of the United States showed that a preponderance of rural school systems have at least one type of electronic technology available to them. Although most rural schools have had some type of technology (e.g., audio tapes, radio, instructional television, two-way TV, and teletype) for years, this study was primarily concerned with the emerging electronic technologies. Microcomputers were most common, as indicated in Table 1.

States with the lowest levels of accessibility were in the deep South. In addition, a disproportionate number of Bureau of Indian Affairs school system respondents stated their schools had no technology available.

Even though 88% of those interviewed had at least one microcomputer in their district, a surprisingly low percentage, only 18%, were

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TABLE 1
Types of Technology Available to Rural Districts/ Cooperatives Surveyed

Type of Technology	*Percent*
Microcomputers	88
Videodiscs	19
Telecommunications	18
Satellite communications	2
Other (voice synthesizer, specialized phone equipment, etc.)	21
None	12

linking these computers with telecommunications systems. Interactive applications of videodiscs and microcomputers were just beginning to be investigated.

Microcomputers were more popular in rural schools than were mainframes. Cost factors were reported to be responsible for this. Respondents said their rural districts/cooperatives could afford microcomputers but couldn't afford mainframe or minicomputers. They also reported that microcomputers were more accessible to remote locations. Most of the respondents also said that microcomputers were more compatible with their isolation from university and state education agency mainframes (although some teamed their microcomputer with a mainframe or a minicomputer via a modem).

Satellites were primarily used in remote areas surrounded by vast land areas with sparse populations. One exception was a system reaching to Appalachia's small clustered towns.

The primary uses of technology identified were as follows: instructional support and applications, 72%; managerial applications, 42%; inservice, 8%. Instructional uses ranged from computer-assisted instruction via microcomputer to satellite-based instruction. Managerial uses by administrators varied from information retrieval to decision making and report generation. Inservice uses ranged from didactic to interactive.

PROBLEM-SOLVING USES OF TECHNOLOGY

There are four primary uses of technology to solve rural special education problems: instructional support, instructional applications, management tools, and staff development applications.

Instructional Support

Computer-managed instruction (CMI) offers a method of administering/evaluating tests, keeping records, and making decisions. CMI software is also designed to support the instructional system and provide diagnostic feedback regarding student performance.

Educational technology can improve the quality of education in rural school districts by giving students access to much more extensive curricular offerings. Amplified telephone systems allow students to hear lectures or hold discussion sessions with remotely located persons. Instructional television, including transmission via cable or special satellite, presents subjects that might otherwise be omitted from the small school curriculum.

Availability of learning technologies makes teacher specialization unnecessary and permits instructors to spend more of their time teaching basic skills or supervising individualized study. Technology can also assist in overcoming isolation from urban cultural institutions; music, plays, and other art forms can be transmitted electronically. Library materials and searches are also accessible through global information and dissemination systems such as the Source or CompuServe.

A great deal of software is appearing for testing procedures, including individual "online" testing and rapid scoring/interpretation. Statements of IEP goals and objectives can be directly linked to assessment instruments accessed through currently available software data bases. Consistent curricula can then be developed.

With microcomputers, small schools can now afford to access mainframe programs for monitoring schedules and follow-through aspects of student IEPs. Programs can also facilitate the creation of reports from the centralized data base.

Resource and information systems such as SpecialNet and its Rural Bulletin Board, statewide telecommunications systems, and global electronic communication systems are also available. These provide data bases of media, materials, and other human and program resources. Such linkage systems increase knowledge regarding service options for rural handi-

capped children; they also allow personal conversations among rural special educators regarding daily problems and successful strategies.

Many teachers are finding that they can computerize routine drill, reinforcement, and record keeping, leaving more time for actual teaching. This is of tremendous benefit in understaffed rural school systems, particularly those in which a "generic" special educator serves students with multiple types of disabilities.

Word processing software capabilities are also a time saver for many generic rural special educators and others in systems with inadequate resources who must prepare their own curricula.

Modern technologies are facilitating communication and collaboration among many schools and human service agencies. Agencies are also now electronically exchanging nonconfidential diagnostic and progress reports. This ability to collaborate on service delivery on an as-needed basis is preferable to rural school consolidation.

Unique support systems are also being generated among remote rural families having children with similar disabilities. These families are developing the capacity to compare service delivery effectiveness, home teaching, and availability of resources. As many ranches, farms, and other rural businesses now have microcomputers connected with global telecommunications systems, this approach does not always require the assistance of school personnel.

Similarly, communication between service providers and families is being strengthened via technology. This is sometimes as simple as locating a CB radio at the hub of a "holler" surrounded by geographical barriers. Typically, it means exchanging videotapes among remotely located families and specialists.

Instructional Applications

Computer-assisted instruction (CAI) has the advantage of being interactive. The computer assumes a direct instructional role. CAI includes drill and practice, tutorial, simulation modeling, problem analysis, and instructional game possibilities.

Equipment such as the Kurzweil Reading Machine or the Optacon print reading aid are of particular importance to rural schools lacking sufficient numbers of specialists to teach those with low-incidence handicaps.

One- or two-way instructional television also offers more diverse instructional alternatives, as do satellite-based delivery systems such as the Appalachia Community Service Network.

Mobile vans with specialized electronic equipment are becoming more frequent as a way to reach students in remote locations whose school systems lack either full-time teaching specialists or extraordinary equipment. The vans may have a diagnostic and prescriptive focus or carry mobile electronic curricula.

Many disabled students are personally accessing statewide or national telecommunications systems to obtain service or instructional information. Many specialized pupil services, including vocational guidance and academic diagnostic and prescriptive activities, are now computerized.

Actual student experience with technologies can develop realistic career alternatives for students with disabilities, such as computer programming positions that require little physical agility for individuals with physical disabilities.

Management Tools

For years, numerous urban school systems have used expensive mainframe computers to generate reports for local or state requirements. However, it was not until the advent of the silicon chip that this became a possibility for most rural districts. In fact, Alaska now has a system of developing interface capabilities for exchanging data and updating student files at each site of a district/cooperative or across the state. The northernmost school system of this rural state links each educator/district by a network that enables direct computer-to-computer transfer of student-related, budgetary, and other types of information. One frequently cited advantage of such systems is more accurate record-keeping, particularly for single administrators handling large geographic areas.

Advanced instructional technologies including two-way television, instructional satellites, and microcomputers have facilitated staff differentiation. Cooperatives/districts have been able to retain specialists (such as an itinerant low-incidence teacher or a teacher of rural gifted children) by sharing that person with

other districts via instructional technology. Personnel retention results from cost savings (i.e., reduced layoffs) and from personal relief to the specialist (e.g., less time spent traveling).

In fact, some administrators reported that increased use of instructional technologies promote staff retention (Helge, 1983). Isolated special educators who can frequently communicate with those in similar circumstances feel much less professionally isolated. With the added personal benefits of electronically secured cultural resources, many rural personnel who might otherwise flee isolated areas do not.

A "capital-intensive man-machine model" was designed by Willett and Swanson (1979) to reduce the labor intensity of rural education. The model reduced the numbers of professional personnel and increased the numbers of student workers used. Technological media and programmed instruction were heavily relied upon.

Staff Development Applications

Satellite inservice sessions allow participants to benefit from the knowledge and expertise of consultants or professors in distant locations. Such sessions benefit rural educators when they include demonstrations of techniques for working with low-incidence handicapping conditions.

While didactic staff development sessions can be helpful and are often all that is feasible, interactive sessions can frequently be arranged via two-way television or satellite transmission. As a valuable follow-up or staff development activity, videodiscs of an educator's strategies with children with disabilities can be mailed to a specialist/consultant for feedback.

Accessing information systems via telecommunications is a staff development technique that does not need to be limited to use for an immediate need. Grouping teachers or administrators to discuss optimum benefits from such a system is advisable. Formal computer-assisted instruction can, of course, be a learning technique used by the teacher as well as by students. This has been accomplished by mailing appropriate software to teachers and by a mobile inservice van equipped with computers.

IMPLEMENTATION PROBLEMS

The problems experienced by those implementing advanced technologies in rural environments may be grouped into four categories. These include the state of the art of advanced technology, fiscal inadequacies, staff development needs, and adverse parent or community attitudes.

State of the Art

A primary problem for special educators is that few technology designers, especially computer programmers, have had knowledge of special education. Many well-composed programs have been poorly suited to classroom use for integration with existing curricula.

Even fewer programmers have understood rural constraints and issues. Communications among developers and potential users have generally been poor. Confusion, and some differential pricing, have been caused by the myriad of vendors in the field. Sales organizations have confounded this problem by a lack of follow-up or servicing after installation.

Incompatible microcomputer or videodisc player equipment and the inability to copy videodisc software are frequently problems. Software incompatibility has prohibited sharing of data bases. Ownership (copyright) guidelines, particularly for satellite receptions, are not yet clear. FCC regulations have not necessarily been developed to fit the rural school situation.

Problems also exist with both direct-access computing systems and mainframe or "service bureau" systems. Direct access systems are those used directly by special education personnel via microcomputer or a terminal connected to a time-shared computer. These systems are usually less expensive than mainframe systems, but they require staff training. Disadvantages include downtime due to "crashes" during peak use, problems over priorities of usage, and associated expenses such as long distance charges.

Mainframe systems require teachers to complete forms, cards, and so forth. Data are sent to computer operators at another location; the central computer processes the forms; and printed reports or IEPs are returned. This system gives no immediate access to the data base, nor can one readily edit or change it. Turnaround time is also a negative factor, especially in remote areas.

Fiscal Inadequacies

The primary monetary problems have been associated with the acquisition of hardware and software. However, rural schools are now becoming aware of monetary needs for staff training, as well.

Front-end costs associated with capitalization of instructional technology hardware (and some software) are the greatest share of total costs, and are often underestimated. Rental of telecommunications lines and long distance charges also represent major costs and appear to be increasing.

Ongoing costs are difficult to predict, since much of the equipment is new and its actual "useful life" and track record have not yet been determined. Some equipment costs soar because new and better products are developed daily. Many innovations, such as adaptations of laboratory science equipment, may take years to be acquired by schools because of their initial expense.

Initial costs, originally perceived to be high by school boards, are later seen as minimal compared to benefits being received. However, initial costs for developmental time frequently are overrun, and there are difficulties in finding experts to assist with computer usage and programming (Helge, 1983). Rural schools have received few company donations of hardware, and rural school personnel are frequently less adept at asking for corporate donations or grants.

Staff Development Needs

Complaints about the use of new technologies have included the following: staff illiteracy and apprehension about computers; personnel needed for training others to use new technologies; staff resistance to procedural changes; human error factors; and unrealistic expectations of technologies. Rural schools have less adequate staff development programs to begin with, and staff training is particularly difficult in rural America, where personnel attrition rates of 40% are not uncommon.

Parent or Community Attitudes

Rural communities value tradition and direct personal contact. Technology is often perceived as an alien influence. Gaining parent and community acceptance is essential. This is especially true with strategies for improvement of parent-educator communication or parent involvement via technology. Rural systems which neglect parent/community attitudes find that their efficient parent training systems are not used, whether they be via remote electronic communication, TV signal transmissions, or simpler methods such as exchanging training and observation videotapes.

SUGGESTIONS FOR INITIATING USE OF NEW TECHNOLOGIES

Rural schools are a unique laboratory for developing and testing new ways of providing education to handicapped students. Some suggestions for initiating successful new efforts are outlined in the sections that follow

Seek external financial aid. Corporate donations have been primarily available to urban school systems with relatively high visibility for the donor industry. It is time to make known to corporations, private foundations, and community organizations the inequities in the availability of technologies for rural schools. Approaching corporations that produce rural-focused commodities should be a first step. Even a small donation can serve as "seed money" for larger grants.

Computer corporations should understand that the rural school system values donations not only of hardware, but also of software or staff training time and resources. Potential tax deductions and visibility for the corporation should be stressed. Although most foundations are not rural-focused, they would value the fact that a rural school system had been able to obtain seed money from corporations or local community organizations. Local businesses or civic organizations may be interested in donating or sharing equipment or staff training expertise. This can gain them positive public recognition and potential tax write-offs.

Consider local rural culture and norms. The "high tech–high touch" approach described by Naisbitt (1983) involves personalizing the use of new technologies. It is particularly apropos for rural America and can be used to generate the support of the rural community. Some of the more successful rural technological innovations have been designed to use existing rural grapevines or to increase the "high touch" approach of rural neighbor helping neighbor.

Create community understanding and support. Use of new technologies must be "sold" not only to school personnel but also to the total community. Offering concrete, hands-on evidence of technology utilization will usually result in a high degree of student feedback and parent acceptance (e.g., a computer printout which a student can take home to share with parents). School personnel should make special efforts to educate their rural community on such positive implications as potential student employment in "information society" jobs and the concrete results in instructional effectiveness and student change resulting from implementation of advanced technologies.

Involve teachers in planning processes. Teacher-initiated uses of technologies are better accepted than when they are initiated by administrators. The adept rural administrator will involve teachers in planning and developmental processes. Continued local enthusiasm for implementation is often due to the efforts of an individual teacher advocate whose support should be cultivated. Administrative and school board advocates are also helpful.

Organizing an interested and enthusiastic staff group will help determine what cognitive and affective approaches are needed for acceptance and use. This group will want to seek advice from other rural practitioners using the same technology before adopting or adapting it for the school system. The assistance of related state and national agencies dedicated to the use of technology should also be sought. Technologies selected for implementation should be flexible, use existing equipment capabilities, be "user friendly," and permit sharing of data bases.

It is wise to begin on a small scale and ensure that success will be reported by the highly efficient rural grapevine. Likewise, flexibility in planning, implementation, and maintenance strategies is essential.

Fragmentary approaches to curriculum development in introducing technologies should be avoided. Implementation should be a school- or district-wide effort, and part of the regular learning situation rather than a "pull-out" activity.

Build staff skills. Staff must understand that technologies can be used effectively to supplement, not supplant, the efforts of rural teachers. An important part of any staff training session will include desensitizing rural staff to technologies. Because most rural teachers derive their job reinforcements from positive interactions with students, training must emphasize that technologies do not substitute for teacher-student interaction. Rural schools should also express their inservice and preservice training needs to university preparation programs.

Ensure student participation. Student participation will be enhanced if technologies are readily available in the classroom or associated with greater student scheduling flexibility. Extensive efforts should be made to teach students the immediate and career opportunities available through technologies.

SUCCESSFUL MODELS

Selected examples of successful uses of technology to solve rural problems are described in this section. These models were developed in a variety of rural settings and with diverse groups of individuals for such purposes as direct instruction, instructional support, management, and staff development.

Obtaining Service Delivery Information

The ACRES Rural Bulletin Board is administered by the American Council on Rural Special Education (ACRES). This bulletin board is part of the SpecialNet telecommunication system operated by the National Association of State Directors of Special Education. Any person or agency having access to SpecialNet may post information on the ACRES Rural Bulletin Board.

The Bulletin Board provides information about conferences on rural special education, successful practices in specific types of rural subcultures, rural job referral services, federal and state policies that affect rural handicapped individuals, the ACRES Resource Network, and recent publications on rural special education. Readers are encouraged to use its electronic mail capabilities to communicate directly with other users.

The National Rural Independent Living Project of Murray State University operates computerized resource systems in rural communities across America. The project locates and makes available resources that enable disabled

persons in rural communities to live independently (transportation, assistance in the home, etc.). Each community system has a self-contained local resource system plus access to a national resource and information exchange system.

Instructional Programming Information

The North Slope Borough School District of Alaska uses a computer-assisted management system to organize special education programming. The system assists in development of the IEP and generates required reports. The computer program handles the repetitive paperwork aspects of creating and managing IEPs.

For example, district administrators developed programs that linked many IEP goal/objective statements to assessment instruments. This provided a criterion-referenced inventory of performance analysis on more than 200 key skills in reading and math. The computer program also included content areas ranging from study skills to sensory perception skills.

Gathering Data for Prescriptive Programming

A Head Start program in Otsego County, New York, uses videotapes in which a child reacts to a structured sequence of situations as input for prescriptive programming. Children involved are located in remote areas, and the videotapes are sent to and viewed by staff at a more centralized rural facility. Their input is used by local personnel for planning prescriptive programming for the child and for locating agencies which can best provide appropriate services. The tapes become a permanent part of the child's records against which subsequent recordings are compared. Testing the child in a home-school situation eliminates clinical aspects which often affect performance.

Parent Training

In a program in Newfoundland, videotapes are the primary vehicle for training parents of children with hearing impairments. During a four-day residential workshop for these remotely located parents and their children, parents view teaching videotapes. Training videotapes are later sent to the families on a monthly basis for use with their loaned videotape playback units. An auditory trainer is also furnished to parents for use at least once per day in one-to-one language teaching sessions with children, as described in the videotapes.

The program has tremendously reduced the number of staff needed for home visits. A visiting teacher went to each home once per semester and conducted weekly telephone counseling sessions with parents. Considerable improvement was noted in parenting behavior and child performance.

Parent Communication

Strategic placement of CB radios was an inexpensive approach to communicating with parents in rural Appalachian "hollers" that are hard to reach because of their terrain. The excellent natural communication system allowed relatively quick access to parents and provided a needed and reliable way to carry messages. More sophisticated "instant" communication systems for service providers and their families use telecommunication.

Increasing Curricular Offerings

A high school in Littlefork, Minnesota, facing a decline in quality because of dwindling school population, inflation, and fewer resources, designed a system offering 178 courses to 78 high school students. Four outside resources, typically used as supplements to courses, were combined to make one curriculum package. These included computer courses, correspondence courses, audiovisual resources, and video tape recorders.

The district set aside a classroom in the high school for its "one-room schoolhouse" and equipped it with study carrels, computers, and other electronics. A manager uses diagnostic records, counseling, contracts, and other student learning devices. Individualized learning goals and styles are emphasized. Resources used in the center have been reported to be cost-effective (e.g., cost per hour for a computer-taught course is $5.49). Discipline problems have been exceptionally low because of a high level of student motivation.

Saving Staff Costs/Labor Intensity

The need to reduce the numbers of professional personnel required was the initiative for a short-staffed remotely located learning center

to rely heavily on the use of technological media and programmed instruction. A model designed by Willett and Swanson (1979) used ten learning areas of individualized instruction for 1200 rural students.

Each learning area corresponded to subject matter and was supervised by a resource specialist or a special service teacher. A teacher-senior for diagnosis and curriculum supervision and an administrator completed the professional staff of 12 for this learning center. Local paraprofessional personnel included 18 adults and 22 students. The number of student workers and paraprofessional staff made the project much less professionally labor intensive.

Several types of hardware and software were available at each learning center, and students worked individually through prescribed program materials which had built-in evaluators and reinforcers. Staff reduction paid for a large portion of necessary technological and other media, and the model was judged cost efficient.

Instant Communication/Feedback

Telecommunication systems allow administrators to participate in case conferences without being physically present. This is particularly valuable when responsible administrators are located great distances from the site of IEP meetings and service providers. Some such systems are implemented at the district level.

A state-wide audio teleconferencing network interconnects educational providers and receivers in isolated, rural areas of Montana. The system uses live interactive audio with occasional computer networking to provide programming to small, rural, isolated educational institutions and communities across the state. Housed at Eastern Montana College, the system serves 47 sites, including schools and other community agencies.

Educational offerings are available at all levels, including junior-senior high school courses, college courses, and inservice coursework for K–12 teachers. State-wide educational meetings held using this system eliminate expensive and time-consuming travel. Electronic mail systems have enabled the agency delivering services and its supportive/monitoring agency to communicate instantly regarding problems, potential resources, and so forth.

Allowing Students to Stay in Their Communities

For years, the small populations of school-aged children in Alaska made it necessary for many communities to send their special needs and high school students to larger communities for instruction. Now, satellite instruction to remote communities has enabled many Alaskan students to stay in their home communities instead of attending residential facilities. A continuum of services has been designed ranging from totally home-based education with satellite instruction to short-term or long-term boarding school instruction.

Serving Homebound Students

Homebound students may be served via telecommunications through a telephone hookup in the child's home. This also increases communication between the student and teacher about learning difficulties.

A television placed in the student's home, depending upon the sophistication and resources of the geographical area, can be used to transmit educational programs designed/produced by the state or district. Alternatively, the classroom setting can be broadcast to the home. Broadcasting may occur via one-way audio (didactic) from class to home or two-way audio (interactive instruction).

Challenging Gifted Students

The advanced studies of 8 to 12-year-old gifted students at Calhoun County High School in Grantsville, West Virginia, include introduction to computers and programming, telecommunications systems, and programmed instruction. Project REACH (Raising Educational Achievement by Changing Horizons) includes a supervisor for special education and a teacher/program facilitator as sources of support.

SUMMARY

Technological equipment, information, experience, and expertise offer tremendous potential for rural administrators, educators, and disabled students. The use of modern technology assists in overcoming serious service delivery problems associated with sparse populations, scarce resources, and difficult terrain. Rural school and related agency networking has al-

ready rapidly increased, and numerous interagency agreements to share equipment among rural areas have emerged.

Technology can strengthen ties between rural community and school. In fact, it can actually assist rural schools in shattering the stereotypes of stagnant rural communities and school systems. The potential for application of emerging technologies is limited solely by the imagination of those planning and implementing them.

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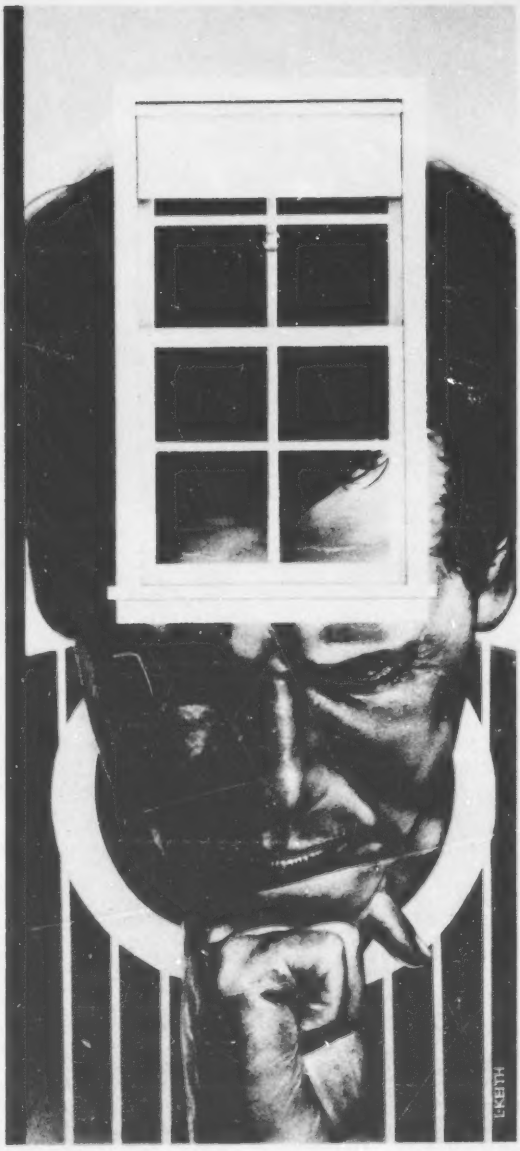

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Should a Special Educator Entertain Volunteers? Interdependence in Rural America

LAWRENCE W. MARRS

Abstract: Rural communities have a tradition of helping each other and of shared interdependence. The National Rural Independent Living Network is developing Community Independent Living Service Delivery Systems in over 500 communities by 1986. Strategies are provided for designing a volunteer program, recruiting and training volunteers, and linking volunteers with disabled persons.

LAWRENCE W. MARRS *is Professor and Chairman, Department of Special Education, Murray State University, Murray, Kentucky.*

■ Rural Americans take pride in helping each other solve problems; they know each other, are aware of needs and resources, and are willing to share what they have if their neighbors need it. These characteristics can be observed every day as neighbors help each other with agricultural chores, construction tasks, and care during times of illness.

One-third of the nation's population lives in rural areas. This percentage is increasing as the movement away from cities intensifies (Naisbitt, 1982). Most states provide regional offices or some other service delivery mechanism with responsibility for meeting the needs of rural people who have disabilities. However, most rural citizens either don't know about the service for which they are eligible or are too proud to "go on the government dole."

PROBLEMS IN RURAL SERVICE DELIVERY

Since the passage of Public Law 94-142, the number of rural public school handicapped children identified and served has increased by 92% (Helge, 1980). However, even though the percentage increase has been substantial, services in rural school systems have been sporadic. For example, most rural systems began delivering special education services in elementary grades, but neglected to expand these services in secondary programs. As a consequence, many handicapped youth have no services available as they reach high school age, and drop out of school. In addition, most rural communities "cannot afford" early childhood handicapped programs. Consequently, these services are not usually provided.

Because of cutbacks in federal funding, many states trimmed their special education budgets by altering the formulas with which

they calculated reimbursement to local education agencies. Thus, hundreds of school systems across the country either reduced the number of special educators in their programs or did not add previously planned positions. Concomitant with these retrenchment moves in public schools, social service agencies were also affected by budgetary cuts and were forced to reduce services and field personnel.

HOW ABOUT DOING SOMETHING DIFFERENT?

The National Rural Independent Living Network at Murray State University, funded by the National Institute of Handicapped Research, is capitalizing on the inherent attributes of rural communities by creating Community Independent Living Service Delivery Systems staffed by citizen volunteers and professionals. Currently located at 20 sites, they will be housed in over 500 rural settings by early 1986.

The project is developing a network of rural communities and establishing communication and sharing systems within and among these communities. This network is composed of individual volunteers, existing service and social clubs, libraries, churches, country stores, volunteer fire departments, and other organizations that wish to help their disabled neighbors lead relatively independent lives.

THE PROCESS

Twenty rural communities were selected to participate in the developmental phase of the project. Project staff spent time in each community identifying residents with disabilities and determining their independent living needs. Data regarding community volunteer resources were also assessed.

Within each community, a central core group is identified. Such groups include county libraries, ministerial associates, rural corner stores, public schools, and other sites which can be used to link local resources with people having needs. Staff assist central core members in the development of the Community Independent Living Service Delivery System for their community.

A computerized resource matching system is installed in each central core group to link local volunteers and professionals with people who have disabilities and who need services. Additionally, all of the service delivery systems may be in contact with each other via computer for resource sharing purposes.

The following sections describe the development and implementation of a Community Independent Living Service Delivery System which takes advantage of all available volun-

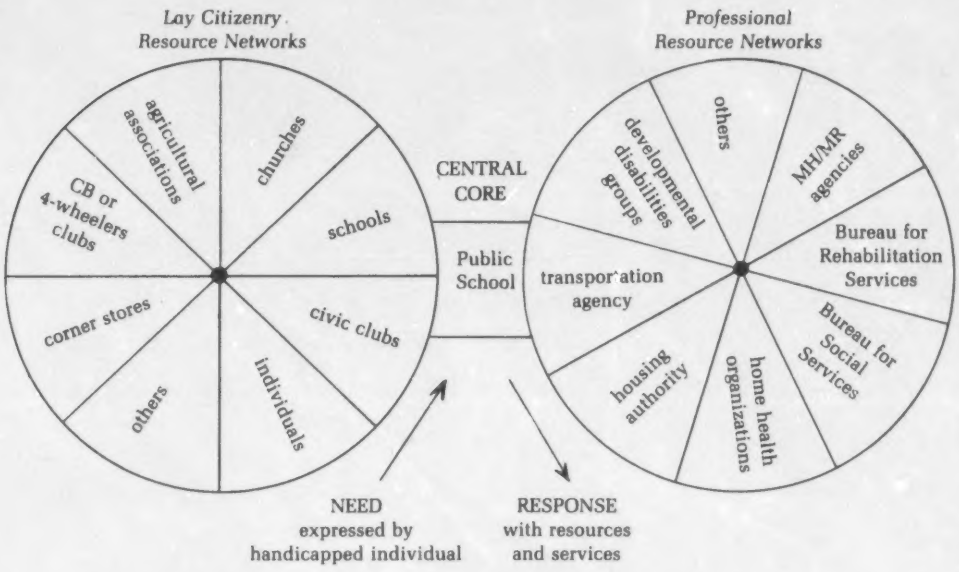

FIGURE 1. Community Independent Living Service Delivery System.

teer and professional resources in a particular rural community.

THE MODEL

Figure 1 illustrates the linkage system which incorporates networking concepts allowing lay citizens and professionals in rural areas to provide resources needed by disabled persons. This particular service delivery system has the public school as its central core. The elements identified within the spokes of the wheels for lay citizens and professionals are merely cited as examples, since each community will have many different elements appropriate to its own area.

Most rural areas will have a wide variety of groups wishing to participate in the service delivery system. The following list of potential participants was drawn from the archives of exemplary rural programs maintained by the National Rural Project at Murray State University:

4-H clubs
advocacy groups
bookmobiles
CB radio clubs
Chambers of Commerce
civic clubs, including Woodmen of the World, Lions, Rotarians, and Jaycees
country stores
county health nurses
disabled and nondisabled veterans
electronic bulletin boards
foster grandparents
garden clubs and other social organizations
Girl and Boy Scouts organizations
Golden Age Centers
ham operators
home demonstration or county extension agents
individuals who own computers
lift-equipped school buses, unused while children are at school
local businesses
local TV, radio, newspaper
mail carriers
meter readers
milk carriers
ministers
newspaper deliveries
post offices
private pilots
retired personnel
telephone service personnel
unemployed personnel
vocational rehabilitation centers
volunteer fire departments
Welcome Wagon volunteers
Wranglers Riding Clubs

The examples cited within the spokes of the wheel for professional resource networks (Figure 1) represent human service agencies which might be present in any rural community. Clearly, there would be others, and some would have different titles for the same function, depending upon local and state activity and regulations.

The central core (in this case, the public school) provides the linkage system. It draws appropriate resources from both the lay citizenry and professional resource networks, depending upon the availability of resources and the specific needs of individuals with disabilities. The public school shown as the central core unit in Figure 1 is one of four models developed by the National Rural Independent Living Network. Rural public schools are powerful political units held in high regard. They promote community integration and are effective instruments of change. Parents faithfully attend back-to-school nights, and the school building is seen as a valuable community resource.

VOLUNTEERISM

Carl Hess (1982) stated:

> There's something about volunteerism that is very subversive—in this century at least. It flies directly in the face of the two major conventional wisdoms of our time—professionalism and corporatism. (p. 86)

Hess argued that early Americans volunteered to help their neighbors on a routine and expected basis. However, in the recent era of massive social change, society began to expect that "professionals" could solve serious problems and that volunteers could deal with necessary tasks that professionals couldn't justify doing or didn't want to do. As a result, professional organizations and their media are decrying the infusion of lay citizens into what professionals have recently considered as their own domain.

The hard truth is that many tasks undertaken by professionals could easily be handled by lay citizen volunteers, particularly with some direction by professionals. Once professional educators and other human service providers

understand the reality that the golden era of professional human service is over, they will begin to search for alternative resources to keep service delivery at prebudget-cut levels. Making use of the volunteer community is the only way to do this.

Why Use Volunteers?

Most volunteers are already active, busy individuals participating in extensive communication networks throughout the community. The goodwill they can generate for an agency or organization will be beneficial at budget time or when attempts are made to curtail services. Because of volunteers' involvement in this extensive communication network, additional resources may be offered from community businesses, social and civic clubs, individuals, and so on.

Professionals capable of directing a trained group of volunteers will be able to provide more services to more people than if they operated simply as "one-person shows." Volunteers can often handle routine activities, freeing the professional to provide more sophisticated or indepth services.

Reasons frequently cited for not involving volunteers include the extensive time required to train them, concerns about their reliability, a desire to keep school and community separate, and confidentiality issues. All of these can be overcome by the development of an appropriate recruitment, training, and matching system.

Rural volunteerism is already a highly respected and valued activity. Although most rural citizens won't call themselves "volunteers," they will admit that they helped neighbors bring in the crops or build a barn, took them shopping, or mowed their yards. All of these types of assistance are needed by some rural disabled citizens. Once rural neighbors are aware of the need, they usually help out with little expectation for recognition or reward. On the other hand, most rural citizens have not been exposed to many persons with disabilities, primarily because the most visible and serious disabilities are low-incidence conditions.

People volunteer for a variety of reasons, among them the following:

- Community recognition
- The chance to do something different or learn something new
- The opportunity to meet others
- Companionship and friendship
- Recognition that the Community Independent Living Service Delivery System is doing something important
- Association with a group or organization whose mission includes volunteering
- The opportunity to help someone seen as less fortunate
- The opportunity to use skills and provide services in a unique manner

ESTABLISHING A NETWORK

Good volunteer networks do not happen spontaneously. Planners in rural communities must be knowledgeable of the community power structure and communication networking system. Community leaders, including officers of civic clubs, social clubs, church groups, and professionals in human service agencies, should be briefed on the proposed Community Independent Living Service Delivery System. Suggestions and names of community contacts should be requested and used.

A second group to be included in the initial planning stage are people with disabilities, their families, and existing support systems (both volunteer and professional agencies and organizations). Their advice about their needs with respect to independence within the community should be sought. The need for human contact, for example, was most frequently cited by elderly people to staff of the National Rural Independent Living Network. From direct discussions with disabled people, planners can also learn which businesses, state and local agencies, churches, etc. are accepting of disabled persons and accessible to them.

Forming a Task Force

Once planners have determined that a Community Independent Living Service Delivery System is acceptable to potential volunteers and to local citizens with disabilities, a task force should be formed, consisting of disabled persons, parents or others who provide daily care, and representatives of schools, businesses, churches, and civic and social organizations. The purpose of the task force is to formulate community-specific policy for the service delivery system.

Networks vary from simple service delivery

to a handful of disabled individuals to total community networking systems in which any person in the community, disabled or not, can receive the services of volunteers. By vesting the task force with decision-making authority, a network involving all elements of the community can be successfully formed. Because of the diversity among rural areas, the types of organizations and agencies included will differ. However, the concept of shared interdependence will remain consistent. The Community Independent Living Service Delivery System can become the focal point for total community interdependence across a wide band of services.

Recruiting Volunteers

Nearly every person in a rural area can contribute something to the service delivery system. Contributions might include services such as yard work, personal care, or home care; use of skills constructing ramps or teaching cooking or gardening; and helping to access other resources such as state or federal funds or services for the disabled.

The key to involving volunteers is personal contact. Very few volunteers respond solely to media appeals. Presentations to civic, professional, and other organizations by task force members, followed by personal telephone calls, face-to-face visits, or letters will generate numerous volunteers. The National Rural Independent Living Network uses a total community involvement process, including personal contacts and the distribution and collection of a Resource Assessment Instrument to a wide spectrum of the community through churches, schools, businesses, clubs, and other organizations. Identification with the local effort is enhanced by distributing stickers for use on cars, businesses, and the windows of homes of those who return completed Resource Assessment Instruments.

Cooperation of the local media is also important. There is great human interest in a community joining together to assist people who have disabilities. If the focus is on a specific week or weekend, a series of articles or news reports can aid the recruitment effort.

Once the Resource Assessment Instruments are returned, task force members should interview each prospective volunteer, in person or by phone, to clarify any ambiguities and to determine more specifically the types of volunteer service being offered. This interview should also ascertain the degree of training the volunteer will need to work with people who have specific kinds of disabilities. The initial recruitment interview is particularly important for identifying persons who may not be suited to volunteering, or whose motives may be suspect. However, most rural community communications and networking systems are so strong that undesirable individuals are readily identified and excluded.

Training

The primary training objective is to enable the volunteer to overcome fears of the disabled. Feelings of insecurity, discomfort, fear, pity, anxiety, or similar stumbling blocks are present in most would-be volunteers who have never worked or associated with disabled people. The desensitization of the volunteer toward disabling conditions is necessary.

Simulation of a disabling condition is one kind of training. For example, a volunteer might spend an entire day in a wheelchair, using a blindfold, or with arms and/or legs tied to prevent movement. Simulation is followed by a discussion of how the "disabled" individual felt when ignored or treated condescendingly by others. Such a process enables a volunteer to understand that the disabled person is a real human being, more like the volunteer than different.

Another major type of training is based on specific disabilities and needs of disabled residents. Professionals volunteer their services to train volunteers in such activities as helping a nonambulatory neighbor in and out of a wheelchair, guiding a blind person around town, adapting activities to the physical capabilities of elderly people, and so forth. School personnel can train volunteers to perform routine tutoring, behavior reinforcement, and other activities that occupy a great deal of the special education teacher's time.

Linking Volunteers to People Needing Services

The linkage system devised by the National Rural Independent Living Network is a computerized resource matching system. Using Apple IIe computers and PFS:File and PFS:Report software, the Community Independent Living Service Delivery System searches its

volunteer skills-bank for one or more volunteers who "fit" the request for services. The volunteer skills-bank includes the information provided by community residents who completed the Resource Assessment Instrument. Additionally, the resource matching system includes information about state and federal services and resources which should be available.

Another function of the resource matching system is to maintain a record of volunteer use and services requested by specific persons. This allows the involvement of many volunteers rather than a select few, and also provides the ability to forecast the needs of recipients based on previous experience.

Although the National Rural Independent Living Networks are computerized, it is entirely possible to run the resource matching system out of a file cabinet or to use a "cards and stylus" type of sorting system.

POTENTIAL PROBLEMS

Recruiting volunteers is not a problem in rural America. The main problem is keeping them busy. It is discouraging for a volunteer to complete the Resource Assessment Instrument, receive training, and then wait for a call that never comes. Volunteer coordinators should contact volunteers at least monthly with a status report of what is being done and involve them in some type of activity.

Groups of volunteers could be coordinated to provide a community service, even if it is not at the direct request of a person having a disability. Some communities have created a total community networking system wherein any citizen can request services of a volunteer. This keeps more volunteers busy and still meets the needs of those with disabilities.

Maintaining organizational momentum is another problem area. Ongoing public relations and media coverage must be provided. News articles about successful volunteer activities; presentations to social, civic, and business organizations about service delivery functions; and other types of community awareness strategies should be employed.

Many professionals feel threatened by having volunteers interfering with their business. This problem can usually be alleviated, particularly in rural areas where professional staffs are small and overworked, by involving professionals early in the development of the service delivery system and soliciting their assistance as trainers of volunteers. Their advice should be sought on an ongoing basis.

SUMMARY

Rural special educators and others who work with handicapped persons are in a unique position to create a system of interdependence within their communities. Rural areas are excellent arenas for the development of interdisciplinary activities which cut across professional and community lines. They have already established traditions of helping each other, and they prize personal and community interdependence.

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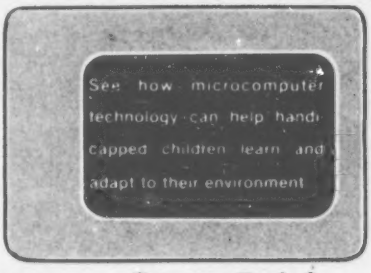

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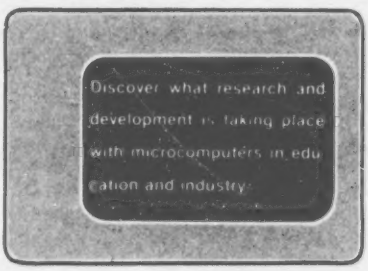

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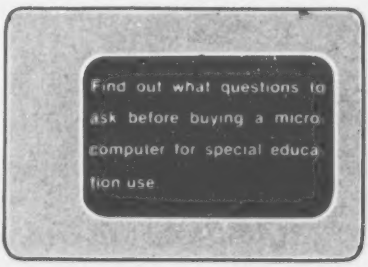

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The American Council on Rural Special Education (ACRES) has established a nationwide system to link educators and administrators needing jobs with agencies having vacancies. Rural school job vacancies of all types are published in the ACRES quarterly newsletter and are also stored in a computerized Rural Job Data Bank.

A Personnel Exchange Service is also available as part of the job referral service, for educators interested in temporarily exchanging positions with similar professionals in other rural areas. Information is also sent to participating school districts regarding possible matches of positions available and applicants interested in exchanging positions.

For further information, contact: ACRES Rural Jobs Services, Box 2470, University Station, Murray State University, Murray KY 42071.

ELECTRONIC BULLETIN BOARD

The ACRES "RURAL" Bulletin Board allows instant communication about rural special education issues and promising practices. Anyone having access to SpecialNet, the electronic communication system operated by the National Association of State Directors of Special Education (NASDSE), may use the ACRES "RURAL" Bulletin Board by checking the bulletin board named "RURAL." Items you will consistently find displayed include information on:

- Conferences related to rural special education.
- Samples of successful practices appropriate for specific types of rural subcultures.
- Items related to the ACRES Rural Job Referral Services.
- Federal and state policies with importance for rural handicapped individuals.
- Access to the ACRES Resource Network (linking members with specific needs and interests with other members with related expertise).
- Lists of recent publications concerning rural special education.
- Challenges to the field.

For futher information, contact: ACRES, Box 2470, University Station, Murray State University, Murray KY 42071.

INSERVICE TRAINING MODULES

The American Council on Rural Special Education (ACRES) has available a series of inservice training modules for rural special educators and administrators. Topics range from stress reduction to alternate rural service delivery systems. If you would like to receive further information on these materials, contact: ACRES, Attn: Inservice Training Modules, Box 2470, University Station, Murray KY 42071.

PRESERVICE MODULES

The National Rural Project was funded by the U.S. Office of Special Education Programs to develop, validate, and disseminate rural special education preservice curricula. Nine preservice modules were developed by the NRP and are being field tested in universities across the country.

Over 30 universities field tested the following curriculum modules during the summer and fall of 1983:

1. The State-of-the-Art of Rural Special Education
2. Alternate Instructional Arrangements and Delivery Systems for Low-Incidence Handicapped Students in Rural America
3. Warren Springs, Mesa: A Rural Preservice Simulation

4. Solving Rural Parent-Professional Related Dilemmas
5. Working With Parents of Rural Handicapped Students
6. Involving Citizens and Agencies of Rural Communities in Cooperative Programming for Handicapped Students
7. Working With Peer Professionals in Rural Environments
8. Creative Resource Identification for Providing Services to Rural Handicapped Students
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For further information about obtaining these preservice modules, contact: Director, National Rural Project, Murray State University, Murray KY 42071.

PRESERVICE CONSORTIUM FORMED

Rural school districts experience serious difficulties recruiting and retaining qualified personnel, and university training programs can make a significant difference. Representatives of 65 universities first met in Washington, D.C., in December, 1982, and discussed problems faced by preservice training institutions as they prepare rural special educators.

Consortium members receive newsletters, participate in teleconferences, and develop and react to preservice curricula designed to prepare rural special educators. If you are interested in discussing innovative solutions to rural preservice training problems and/or in having your institution becoming part of the National Rural Preservice Training Consortium, contact: National Rural Preservice Training Consortium, Special Education Building, Murray State University, Murray KY 42071.

NRP NEWSLETTER

The National Rural Project Newsletter is available on a subscription basis ($12.00 per year). It follows a journal format and includes up-to-date information on issues facing handicapped students in rural America, problem-solving strategies, pertinent legislation and conferences, and articles on rural preservice and inservice strategies. For specific subscription information, contact *NRP Newsletter*, Wells Hall, Murray State Univ., Murray KY 42071.

Fourth Annual National Rural Special Education Conference

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The Fourth Annual National Rural Special Education Conference, sponsored by the American Council on Rural Special Education (ACRES), will be held March 28–30, 1984, at Murray State University in Kentucky.

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Conference registration is $50.00 for ACRES members and $60.00 for nonmembers. The Earlybird Session is $25.00 for members and $30.00 for nonmembers. ACRES is a nonprofit national membership organization established to enhance services to rural handicapped children.

For more information, contact National Conference Coordinator, ACRES, Box 2470, Murray State University, Murray KY 42071, or call (502) 762-2056.

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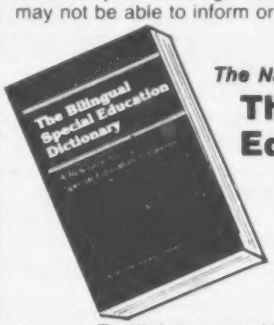

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MEDIA REVIEWS

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BOOKS

Special Education Law: A Guide for Parents, Advocates, and Educators. *Steven S. Goldberg. New York: Plenum Press, 1982, 225 pp. $24.50. Hardcover.*

In the preface to his book, Goldberg states, "This book developed out of the need to provide nonlegal professionals with a lawyer's view of the huge body of court cases and federal laws and regulations that affect their practice as well as their students and clients." In terms of a delineation of basic special education legal principles and issues, the author's stated purpose is realized. The reader must, however, keep in mind the basic limitation of all guide or handbooks—the true complexities and subtleties of an issue are often masked in an effort to simplify and condense information. However, this book can serve as an adequate initial reference source to flag potential legal issues for the special education advocate.

Special Educational Law is nearly equally divided between text and appendices. The latter supplements the text with federal statutory and regulatory provisions of Public Law 94-142, The Education for All Handicapped Children Act of 1975, and Section 504 of the Rehabilitation Act of 1973. Chapter one gives a brief history of the generally inferior (or nonexistent) educational services for handicapped children characteristic of the recent past, and the court cases establishing a basic right to education for all handicapped children. Chapter two discusses the major provisions of the Education for All Handicapped Children Act, the legislative response to judicial pronouncements of handicapped children's educational rights. These include: the notion of a free appropriate public education; individualized education programs; due process procedures; appeals; evaluations; the least restrictive environment mandate; and confidentiality of student records.

Chapter three introduces the reader to Section 504 of the Rehabilitation Act of 1973, another major source of rights for handicapped people. Section 504 prohibits discrimination against handicapped people. Chapter four explains in a concise and readable manner the special education hearing procedures and what to expect if you are involved in a hearing, as an advocate, parent, or educator. As a guide for direct action, this chapter offers the most practical, "how to" advice in the entire book. Finally, chapter five provides the reader with insight into some of the emerging major issues in special education: law-year-round special education; discipline procedures; educational needs and legal problems of non-English speaking children; "educational malpractice" cases; and the rights of gifted and talented children.

Several actual court decisions are reprinted in part. Given the intended audience for this book (nonlegal professionals), it would have been more useful to provide a non-technical summary of the relevant legal principles and implications for special educational policy and practice. The inclusion of federal statutory and regulatory provisions in the appendices was also questionable. It is doubtful that many readers will make extensive use of this material.

In summary, this book serves as an adequate source of information on basic special education law. However, practical advocacy advice is generally lacking for those desiring to take direct action to resolve special education disputes.

DOUGLAS FIELDER *is a lawyer and a doctoral candidate in Special Education, Kansas University, Kansas City.*

Due Process in Special Education: On Going to a Hearing. *Milton Budoff and Alan Orenstein. Cambridge MA: The Ware Press, 1982, 343 pp. $24.95. Hardcover.*

Budoff and Orenstein offer a well written, timely explanation and evaluation of a troublesome issue in special education today—the due process hearing. This book represents the

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results of a comprehensive three-year study of special education appeals hearings in Massachusetts.

Due Process in Special Education details, in a highly readable fashion, what parents and school personnel can expect when they go to a hearing. Personal accounts and anecdotes of parents, educators, and hearing officers are liberally interspersed throughout, thus raising the reader's sensitivity to the issues developed in the book.

The book is divided into five sections. Section I (three chapters) serves as a general introduction to due process requirements, establishing the underlying assumption that procedural fairness will yield fair results. The realities of many due process hearings, however, leave much doubt as to the validity of this assumption. Section II (six chapters) describes the experiences of parents who have participated in due process hearing procedures. The vast majority of parents in this study were middle to upper-middle income parents of learning disabled children. Section III (two chapters) offers school personnel perspectives on due process hearings and disputes with parents. Section IV (three chapters) incorporates the views of the other major participant in due process hearings, the hearing officer. Section V (five chapters) is a synthesis and most useful evaluation of the due process hearing structure. Suggestions for due process reform are also presented.

The book should appeal to a broad spectrum of people. Parents of handicapped children will obtain a better understanding of the economic and emotional costs of participation in a due process hearing. Parents will learn the pitfalls of involvement in a due process hearing and will receive useful tips to minimize conflict and frustration in dealing with schools. School personnel can also benefit from this book, sensitizing them to the evolutionary aspects of adversarial conflict vis-a-vis parents, as well as the attendant destructive results. Attorneys and child advocates will understand the emotional climate, deficiencies, and hidden agendas that often accompany due process hearings. Finally, special education policy makers and administrators may be the greatest hope for improvement in this much maligned dispute resolution process. If they are bold enough to devise alternative mechanisms for conflict resolution and implement resolution procedures, they could prevent disputes from erupting into requests for due process hearings.

Budoff and Orenstein have provided a valuable critique of a system that undergirds handicapped children's legal educational rights. Their suggestions for due process reform are realistic and should not go unheeded. More importantly, their emphasis on building a true partnership between schools and parents in the education of handicapped children is a needed step in the right direction.

DOUGLAS FIEDLER *is a lawyer and a doctoral candidate in Special Education, Kansas University, Kansas City.*

Psychoeducational Assessment: Integrating Concepts and Techniques. *George B. Helton, Edward A. Workman, Paula A. Matuszek. New York: Grune and Stratton, 1982, 364 pp. $24.50.*

Psychoeducational assessment is a complex activity responding to the needs of educators and families to provide effective programming for children. This activity and the current factors supporting it are well described by the authors of this text.

The twelve chapters address a broad array of issues and concerns that must be considered in psychoeducational assessment. Some material in the text is not found in existing books. For example, Chapter 1 and Part I of the text include extended coverage of the legal and ethical concerns of psychoeducational assessment.

Part II of the text provides a more routine discussion of assessment in seven domains: health; intellectual; psychoeducational processing; academic functioning; social/emotional functioning; adaptive functioning; and environmental influences. The vast area included in these domains ensures its discussion will be useful to a general understanding of assessment, although it will be less useful for an educator desiring specialized knowledge of assessment in any one of the domains. The text does provide useful references for more specialized materials. Part III of the text discusses three case studies of IEP staffings and outcomes, valuable for educators with little experience in such activity.

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The text has a number of strengths. It is clear and well written. It is supportive of assessment activity and provides a constructive rationale for assessment based on federal legislation, ethics, and the pragmatic value of teaching using empirical data.

The text has two limitations. Readers will find little guidance for selecting or developing a psychoeducational measure. Although a branching system of assessment is suggested for readers, the system appears designed to identify the sequence of assessing domains, rather than identifying the decision rules that should guide instrument selection. The book is likely to be of limited value for educators in selecting or developing a measure. However, it will be useful in educational areas well supported by psychometrically sound measures.

The second limitation may reflect a preference for assessment of mildly handicapped students vs. moderately or severely handicapped children. The authors believe psychoeducational assessment must serve a dual purpose of programming and classification. Existing instruments provide a weak basis, at best, for such a dual purpose for moderately and severely handicapped children or children with specific handicapping conditions. This assertion is supported by the fact that only two or three of all measures cited have norms for handicapped children. Absence of such norms minimally influences the classification abilities of a measure, but it seriously limits the ability of a measure to guide educational programs for handicapped children.

One could argue that mildly handicapped children proceed along the same course of development as nonhandicapped children, and that the relatively few items contained in most measures are sufficient for program planning for these children. This argument weakens as children are classified as more atypical. This limitation may reflect the primitive state of the art of assessment for program planning for these children more than it does the authors' bias. As the largest percentage of handicapped children are mildly handicapped, the text should still be quite useful for a number of educators.

ROBERT SHEEHAN *is an Assistant Professor of Child Development at Purdue University.*

Severely Handicapped Students: An Instructional Design. *Wayne Sailor and Doug Guess. Boston: Houghton Mifflin Co., 1983, 386 pp. $24.95.*

It is altogether too rare when a special education methods text actually leads the field by providing state of the art information. Thus, it is a pleasure to read the recent effort by Sailor and Guess. Rather than providing a compilation of outdated material, or a folksy "101 ways to have fun with egg cartons" approach to education, the authors have presented a process by which professionals can generate functional, ecologically valid, curriculum content for severely handicapped students.

In Chapters 1 and 2, the authors discuss who comprises the severely handicapped population and outline legal developments that have resulted in the provision of services to this group. Sailor and Guess present a compelling case for a mandate to provide educational services in integrated, regular school environments, a premise that is reflected throughout the book.

Chapters 3 and 4 provide the basic behavioral framework for teaching severely handicapped students. The authors present a well organized discussion of antecedent and consequent intervention procedures, though the use of Ogden Lindsley's suprascript and subscript notation system may initially confuse those familiar with the SR^+ system.

Chapter 5 contains the central text theme: practitioners should inventory a student's current and realistic future environments in order to determine ecologically valid curricular goals and objectives. The authors reject the notion of using a standard curriculum as the primary assessment tool. Rather, they advocate comparing student skill repertoires against present and future environmental demands. This departure from curriculum-based assessment holds a tremendous degree of promise for tailoring curricula to meet student needs, as opposed to molding students to potentially nonfunctional curricula. This chapter is extremely important and well articulated. There is, however, a lack of further information regarding application of the "critical functions" notion in goal selection.

Chapters 6 and 7 give a practical task analytic orientation to instruction and a data collection and graphing system that is both manageable and sensitive to student progress.

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Particularly useful are: the "T Format" combining the content, process, and method aspects of task analysis into one form; the decision rules for when to use the various chaining strategies; and guidelines for program modifications on the basis of specified patterns of performance.

The Individualized Curriculum Sequencing (ICS) Model is presented in Chapter 8. This model involves teaching functional skills within a natural context. For example, students would be taught skills within an integrated sequence, such as walking with a walker to the drink area, then pointing to a picture signifying "drink" and then drinking from a glass. Teaching skills within a contextually meaningful chain should minimize generalization problems that frequently occur when skills are taught in isolation. A possible concern for practitioners is how this approach might be implemented in group instructional arrangements. On lengthy chains in particular, enterprising methods will be required in order to minimize "downtime" and/or behavior problems as students in the group await their instructional trials. The potential benefits of the ICS model, however, suggest that efforts might be devoted to developing strategies for making it work rather than rejecting it as impractical.

Chapters 9 through 12 describe program models for preschool, elementary, secondary, and adult age severely handicapped individuals. The authors provide excellent, thought-provoking program suggestions. There is a consistent application of previously discussed material (inventory, T-format, data collection, ICS) in the examples provided. Despite the positive aspects, the reviewers found these were less useful than preceeding chapters. While no one text can address all issues involved in establishing exemplary programs, readers may have benefited from a discussion of the processes for attaining the suggested program models, common problems in establishing, for example, community-based training models, and potential solutions.

In summary, these reviewers thoroughly enjoyed reading and discussing this innovative text. It crystallized many ideas, challenged a number of previously held notions and led us to examine methods of incorporating the numerous suggestions into classrooms. We recommend it as must reading for teachers. The complexity of the system presented may make this book somewhat difficult for undergraduate preservice trainees. However, it can serve as a primary text, perhaps augmented by the second edition of M. E. Snell's book *Systematic Instruction of the Moderately and Severely Handicapped* (Columbus OH: Charles E. Merrill, 1983), which would add further *content* to the excellent *process* articulated by Sailor and Guess.

SUSAN HAMRE-NIETUPSKI and JOHN NIETUPSKI, are Assistant Professors, Department of Special Education, University of Northern Iowa, Cedar Falls.

The Underserved: Our Young Gifted Children. *Merle B. Karnes (ed.) Reston VA: The Council for Exceptional Children, 1983, 228 pp., $15.00. Softcover.*

Accompanying the current public interest in exceptionally able learners is a slowly dawning realization that the gifted are not a homogeneous population, easily identified and educated. The pioneering work of Merle Karnes and her colleagues at the University of Illinois' Project RAPYHT locates gifted and talented students among the handicapped, economically depressed and the very young. This book, edited by Karnes (who also authored or coauthored five of its nine chapters) is designed to bring to public attention the special needs of young gifted children (preschool through third grade) and to review and integrate research and expert opinion with current practices. It focuses on educators and teacher educators, with a stated goal of providing a springboard for launching exemplary programs (p. v).

The book succeeds in fulfilling its promises. It is well conceptualized and well written for lay and professional audiences. Summaries of current literature are quite thorough and up to date, making it an excellent resource for researchers, teacher educators and classroom teachers. From identification through curriculum development, teacher training and family involvement to program evaluation, each chapter is nearly a freestanding monograph surveying the background, themes and issues of the topic. The book synthesizes suggestions for practitioners and concludes with guidelines for adapting or implementing suggestions. Chapter summaries highlight important

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points. Samples of lesson plans, behavior rating forms, teacher-student dialogues and needs assessment instruments provide a bridge from theory to practice, often a problem with general books of this type. Key qualities of each chapter highlight the contributions within each chapter:

The Challenge: Integrated histories of the gifted child and early education movements. Rationale for early identification and programming. Application of 1972 federal definition of giftedness to young and special populations. Guidelines for teacher preparation and program development. Description of problems faced by the gifted.

Identification: Presentation of issues. Description of models, assessment techniques and instruments. Sample identification plan included.

Conceptual Models: Detailed descriptions of Open Classroom and structure of the Intellect models. Brief overviews of Renzulli's Enrichment Triad, Bloom's Taxonomy and Williams' Cognitive-Affective models. Cautions and guidelines for selecting/combining models included.

Teachers: Discussion of qualities needed for effective teachers of the gifted. Suggestions from Astor Project helpful for administrators involved in recruiting and training.

A Differentiated Curriculum: Presents case for making educational experiences uniquely appropriate for gifted youngsters. Capsulizes and applies work of Renzulli and associates, Maker, Ward and Passow to cognitive, creativity and affective skills needed for young gifted students. Addresses the role of Individual Education Programs in delivering special services. Provides examples of lesson plans and teaching techniques field tested in Project RAPYHT.

Affective Development: Summary of relevant and current literature, theoretical implications with practical suggestions such as sample teacher-student dialogues, guidelines for affective development.

Creativity and Play: Applies principles for encouraging creative growth to sociodramatic play activities of young children. Appropriate for all teachers of preschool/primary students.

The Role of the Family: Importance of family support for nurturing young talent. Useful for any educator seeking support for a parent education program. Family needs assessment form for diagnosing and prescribing family intervention strategies. Staff preparation and options for parent programs.

Evaluation: Purposes of program evaluation. Options, decision making guidelines for evaluating program components. Sample forms add relevance for prospective evaluators.

This publication is a general textbook. Adding to it books such as *A Young Child Experiences* (Kaplan, Kaplan, Madsen, & Gould, Pacific Palisades CA: Goodyear Publishing, 1975), *Educating the Preschool/Primary Gifted and Talented* (Kaplan, ed., Ventura CA: National/State Leadership Training Institute on the Gifted and Talented 1980), and *A Resource Guide to Preschool/Primary Programs for the Gifted and Talented* (Jenkins, Mansfield Center CT: Creative Learning Press, 1979) makes a good library for educators with programs for young gifted students and for teacher educators working with pre- or in-service teachers. The first book focuses on the day-to-day details of open classroom for young children. The second, a collection of program descriptions and critical essays on topics from identification to research, amplifies the contents of Karnes' book for the reader with a specific concern. The third book portrays a broad spectrum of program practices in an easily understood format.

The Underserved: Our Young Gifted Children is a welcome addition to the small but growing number of materials dealing with special gifted populations. It is a book whose timing is necessary and vital to the future of the gifted child education movement.

REVA JENKINS-FRIEDMAN, *is Coordinator, Graduate Training for Educators of the Gifted, Talented and Creative; Assistant Professor, Educational Psychology and Research, University of Kansas, Lawrence.*

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PROFESSIONAL OPPORTUNITIES

Classified Advertising

Notices of professional opportunities in special education are accepted from colleges, universities, school systems, organizations, and institutions offering professional positions, special seminars, study opportunities, and travel-study programs, as well as from individuals seeking employment. Individuals must include name and address or refer to personal box number and post office.

Classified advertising notices are published in CEC's journals, *TEACHING Exceptional Children (TEC)* and *Exceptional Children (EC)*. Forward copy to Classified Advertising, Att'n Jill Winter, Department of Information Services, CEC, 1920 Association Drive, Reston VA 22091-1589. Ad copy deadlines for 1983–84 are as follows:

Fall (September) *TEC*, July 1; September *EC*, July 10; October *EC*, August 1; November *EC*, September 7; Winter (December) *TEC*, October 6; January *EC*, November 7; February *EC*, December 5; Spring (March) *TEC*, January 4; April *EC*, February 6; Summer (May) *TEC*, March 5.

Rate: $1.20 per word. *Advance payment is required on all noninstitutional orders. Invoicing is permitted to institutions when order is presented on a bona fide purchase order signed by authorized official.*

AWARD-WINNING PROGRAM IN EMOTIONAL DISTURBANCE. The American University has openings for Master's Degree applicants for its 10-month full-time Psychoeducational Internship program at Rose School, a D.C. Mental Health facility. The total program is one year, June to June, and consists of 36 academic hours. A $4,000 fellowship is guaranteed for each applicant accepted. Contact Dr. Nicholas Long, School of Education, Roper Hall, The American University, Washington DC 20016. Interested individuals are encouraged to act promptly.

JAPAN AND HONG KONG SPECIAL EDUCATION TRAVEL STUDY. Option for 2 or 3 weeks and 2 or 3 credit hours. July 7–27, 1984. Write for information: Dr. T. Hisama, Special Education, Southern Illinois University at Carbondale, Carbondale IL 62901.

UNIVERSITY OF MARYLAND invites applications to fill two tenure-track positions at the rank of Assistant Professor in the areas of: (1) Educationally Handicapped (preschool and primary level); and (2) Learning Disabilities. Earned doctorate in special education or related field plus extensive preparation and experience in the area of application required. Productivity in the form of scholarly publications or grants is desirable. Applications including vitas, three references, and credential files should be forwarded by February 10, 1984 to: Dr. Steve Graham, Chair, Search Committee, Department of Special Education, University of Maryland, College Park MD 20742.

MIDWEST SYMPOSIUM FOR LEADERSHIP IN BEHAVIOR DISORDERS, February 23–25, 1984, Adam's Mark Hotel, Kansas City, Missouri. Through the cooperative efforts of professionals in Kansas, Nebraska, Iowa, and Missouri, the second annual symposium will be held at the Adam's Mark Hotel located on I-70 at the Truman Sports Complex in Kansas City, Missouri. **"Reflections on Deviance in 1984"** is the chosen theme for this year's symposium. Featured topics and speakers include: "An Interview with George Orwell: Reflections on Deviance in 1984," portrayed by Dr. James Zabel; "Behavior Disorders: The Family in 1984," by Dr. Roger Kroth, University of New Mexico; "Values and Ethics: The Personal Choices in 1984," by Dr. James Kauffman, University of Virginia; "Living in 1984 and Beyond: The Future of Behavior Disorders," by Dr. Richard Whelan, University of Kansas Medical Center. The cost of the symposium is $35.00. A workshop on self-injurious behavior will be conducted from 9:00 to 4:00 on Thursday, February 23 at a cost of $5.00. Preregistration and hotel accommodation information is available by contacting: Midwest Symposium for Leadership in Behavior Disorders, Marcus Center, Wichita State University, Wichita KS 67208, or call (316) 689-3731.

TEACHERS, are you interested in combining school with summer vacation? Intensive two-week courses allow you to earn credit for recertification while enjoying the beaches and historic areas of Pensacola, Florida. Courses include: Independent Living Skills for the Handicapped, Computers in Special Education, Instructional Materials for Special Education, Effective Discipline in the Home and School, and Independent Research in Special Education. These may be taken for undergraduate or graduate credit or on a noncredit certificate basis. The first session begins June 18 and ends June 29; the second session from July 9 to July 20. Further information concerning courses, housing, and child care may be obtained by writing: Department of Special Education, Building 76, The University of West Florida, Pensacola FL 32514, or call 904/474-2893.

CLINICAL COORDINATOR OF LEARNING DISABILITIES DEPARTMENT. The Boys Town National Institute is seeking an individual with clinical and research capabilities in the area of Learning Disabilities. Job responsibilities include evaluation of learning disabled children; supervision of Learning Disabilities Specialists; participation as a member of a multidisciplinary team in the evaluation of children with communication disorders; and assisting in the design and implementation of diagnostic and remedial programs. Position responsibilities will also include the development and implementation of research projects in the area of learning disabilities. Requires a Ph.D. in learning disabilities, with a minimum of two years experience beyond the doctorate. Preference will be given to candidates with a strong background in language development/language disorders and supervisory experience in a clinical setting. Excellent benefits. Send letter of application, vitae, and references to: Phyllis Fleharty, Boys Town National Institute for Communication Disorders in Children, 555 North 30th Street, Omaha, Nebraska 68131. *An Equal Opportunity/Affirmative Action Employer.*

LEARNING DISABILITIES SPECIALIST II. Boys Town National Institute is now accepting applications for a Learning Disabilities Specialist. A master's degree or doctorate in learning disabilities or a related discipline and a minimum of two years experience in evaluation and teaching of learning disabled students is required. Preference will be given to candidates with a strong background in language development/language disorders. Job responsibilities include participation as a member of a multidisciplinary team evaluating children with learning disabilities and other communicative disorders, and assisting in the design and implementation of diagnostic and remedial programs. Salary is negotiable depending on experience and qualifications. Excellent benefits. Send letter of application, vitae and references to: Phyllis Fleharty, Boys Town National Institute for Communication Disorders in Children, 555 North 30th Street, Omaha, Nebraska 68131. *An Equal Opportunity/Affirmative Action Employer.*

PEDIATRIC PHYSICAL AND OCCUPATIONAL THERAPISTS: Opportunity to join interdisciplinary team providing consultation services, evaluation, and direct treatment to children with multiple disabilities. Vacancies in several North Carolina cities. Pediatric experience desired but not required. All state benefits. Salary commensurate with experience. Contact Sue McLaurin, L.P.T., N.C. Division of Health Services, Box 2091, Raleigh NC 27602 (919/733-7437). EEOE.

SPECIAL EDUCATION TEACHERS: All types of special education teachers, especially Profoundly Mentally Retarded teachers, OH teachers, EH teachers, Multihandicapped with Vision Training teachers. Send a letter of application and resumé to: Personnel Department, Florence School District One, 319 S. Dargan Street, Florence SC 29501. EOE.

POSITION AVAILABLE: EXECUTIVE DIRECTOR. Private agency providing residential and community-based services to emotionally disturbed children 6–14 and their families. Special education component, 45 employees, annual budget $1.1 million. Candidate must have graduate degree and significant experience in both human service and business management. Requires a good administrator with proven leadership skills necessary to guide agency in new directions. Must have experience in advocacy and ability to negotiate with funding sources. Resumés to Search Committee, Baird Center for Children and Families, 1110 Pine Street, Burlington, Vermont 05401 by February 1, 1984. *Equal Opportunity Employer.*

BRAXTON COUNTY SCHOOLS are seeking special education teachers (LD & BD), a psychologist, and a speech therapist to begin working January 1984. Enjoy living in the beautiful mountains while contributing to the education of exceptional children. For additional information, contact David McChesney, Director of Special Education, Sutton WV 26601 (304/765-7101). *Equal Opportunity Employer.*

PERKINS SCHOOL FOR THE BLIND is seeking staff for its New Severe Impaired Program. Staff will work with severely to profoundly impaired students ranging in age from 10 to 22. All staff will work as members of an interdisciplinary team. Positions available include full-time Teachers with Degree & Certification in Ed. of Severe Special Needs or closely related field, Teacher Aides, Houseparents, Assistant Houseparents, full & part-time Child Care Workers & part-time Adaptive P.E. Teacher. Also full-time Occupational Therapist (OTR) & part-time Physical Therapist (RPT) & Psychologist/Behavior Management Specialist with M.A. Excellent benefits including the option to live-in at no cost. Please forward resumé to Personnel Office, Perkins School for the Blind, 175 N. Beacon St., Watertown MA 02172. *An Equal Opportunity/Affirmative Action Employer.*

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CEC ERIC's NEWSFRONT

Jean N. Nazzaro
Department Editor

Focus on ERIC/CRESS

The ERIC system is comprised of 16 clearinghouses each focusing on a different aspect of education. In keeping with the theme of this issue, the ERIC Clearinghouse on Rural Education and Small Schools is highlighted. The scope of interest of this center is on the economic, cultural and social factors related to educational programs for American Indians, Mexican Americans, migrants and rural residents. Of special interest is outdoor education and educational programs in all small schools.

The following materials have recently been produced by this clearinghouse:

- *The Preparation and Certification of Teachers for Rural and Small Schools.* Clark E. Gardener and Everett D. Edington. $9.00. A 25-page state-of-the-art review discusses the need for better teacher preparation and certification for teachers going into rural or small schools, looks at current preservice and inservice programs and models, and suggests ways to upgrade the status of rural teacher preparation and certification.
- *Assertion Training with American Indians: Cultural/Behavioral Issues for Trainers.* Teresa Davis LaFromboise. $11.25. Designed for educators, human development specialists, and mental health professionals in developing assertion training programs with American Indian people, this 113-page manual provides an introduction to assertion training; elements of Indian culture and Indian thinking; a selected assertion training model composed of instruction, modeling, behavior rehearsal, and feedback.
- *Fact Sheets:* Parents' Roles and Responsibilities in Indian Education
  Hispanic Culture and Literature: An Overview
  ERIC: Outdoor Education Resources
  Four Day School Week for Small Rural Schools
  Relationship of State Departments of Education with Rural Schools
- *Migrant Fact Sheet:* Utilizing Available Resources at the Local Level
- *Directories:* Organizations in American Indian Education
  Organizations in Rural Education
- *Booklet:* Rural Librarians and ERIC

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For more information contact the ERIC Clearinghouse on Rural Education and Small Schools, New Mexico State University, Box 3AP, Las Cruces, NM 88003.

Important TV Series

Your Children My Children, a seven-part series, will be broadcast this spring on over 200 public television stations. Two of the parts are especially pertinent for us: *Being Normal*, and *Punishment, Neglect and Abuse*. The producers of the series are inviting agencies such as ours to support outreach activities in connection with the broadcasts. Packets of information, a manual of how-to's for activities, and additional information are available from Peggy Chisholm, Outreach Director, YOUR CHILDREN MY CHILDREN, KTCA-TV, 1640 Como Avenue, St. Paul MN 55108.

Professional Standards and Code of Ethics

A new ERIC Short Report has been prepared on Professional Standards in Special Education. This report addresses the need for a Professional Code of Ethics and Standards for Practice

ERIC The Newsfront column is a product of the ERIC Clearinghouse on Handicapped and Gifted Children funded by the National Institute of Education.

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and Preparation of Special Education Personnel. It also highlights the documents themselves which were published in the November issue of *Exceptional Children*. Single copies of the Short Report and the Ethics and Standards documents may be ordered, free of charge from the Department of Governmental Relations and Professional Advocacy, The Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091. Bulk price on The Ethics and Standards packet is $10.00 for 25 copies. Photocopying of these materials is permitted.

RETOOL Projects

CEC's National RETOOL Center has two new projects. One, entitled Microcomputer Applications in Special Education, is designed to provide quality training to teacher educators on the uses of microcomputers in special education. The second project is called Survival Strategies Training: Consultation/Collaboration Skills for Special Educators and Administrators. As the name implies, the goal of this project is to train teacher educators in the consultative/collaborative process. Both of these are scheduled to last for three years.

During this first year of the microcomputer project, activities center around development of training materials and formation of a Computer Using Teacher Education (CUTE) network. During the second and third years, there will be several training sessions held at various sites throughout the country. The first training session will be next summer at Florida Atlantic University in Boca Raton. The primary approach to training will be hands-on activities, with some lectures and demonstrations. Training will cover six modules:

1. Selection and decision making process
2. Software and hardware evaluation
3. Adapting curriculum materials for use on a microcomputer
4. Computer operation and utilization
5. Utilizing Peripherals
6. Microcomputer programming for instructional and management purposes

Activities for the first year of the SST project focus on the development of a Survival Strategies Training manual and the training of four SST teams. The training will help special educators, regular educators, and administrators develop the skills, knowledge, and attitudes necessary to collaborate with each other in providing effective services to mainstreamed handicapped students. To that end, each SST team will consist of three teacher educators: one in special education, one in regular education, and one in administration. Following a multiplier model of training, these team members will, in turn, become consultant trainers. Activities for the second and third years of this project will center around the training of more SST teams.

The National RETOOL Center is housed at CEC headquarters in Reston. For more information about the RETOOL projects, contact Elizabeth McClellan, Project Coordinator.

Focus on SpecialNet: EMPLOYMENT Board

One of the most exciting uses of SpecialNet has become the placement capacity of the EMPLOYMENT Board. State offices, local school systems, and colleges and universities post messages on the EMPLOYMENT board daily. The board's automatic purge of 90 days means there are usually 150 or more current messages on it. Recent vacancy announcements included:

- a science teacher in Florida
- a college instructor in South Dakota
- an editor for a national journal
- an education columnist for a computer magazine
- a school psychologist in Wyoming
- a speech therapist in Alaska
- a special education teacher in Pennsylvania

SpecialNet subscribers are encouraged to post job announcements on the EMPLOYMENT board. To assist you in formating your message, a special "script" is available for you to complete. Simply type C JOB and you will be asked for information about the position you wish to announce. The information you type will be sent automatically to the EMPLOYMENT board.

This year, SpecialNet will increase activities to help assure these announcements are seen by prospective applicants. Access to EMPLOYMENT Board listings will be offered at major National Education meetings.

CEC's convention in Washington, DC is one of the sites where SpecialNet's Employment Board and CEC's Personnel Recruitment Service will be working together.

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New ERIC Acquisition

The following documents may be ordered from Center for Law and Education, Inc., Gutman Library, 6 Appian Way, Cambridge MA 02138. $25.00 for two-volume set. $2.50 postage. They are also available in microfiche or paper copy from ERIC Document Reproduction Service (EDRS), P.O. Box 190, Arlington VA 22210.

ED 227 626, 227 627
Special Education: A Manual for Advocates, Vols. I, II. Diana Pullin.

Volume I. The manual is designed to help attorneys, paralegals, and others act as advocates for handicapped children. The first chapter provides an overview of federal laws concerning the education of the handicapped (including provisions in the Constitution). Chapter 2 lists characteristics and needs of mental retardation, hearing impairments, speech impairments, specific learning disabilities, visual impairment, emotional disturbances, handicapping conditions, and developmental disabilities. Chapter 3 focuses on educational evaluation, including sections on procedural protections, student information, specific types of tests, and bias in evaluation. Placement and programming aspects, such as individualized education programs, least restrictive environment, and related services are considered in Chapter 4. A final chapter details administrative hearings and appeals. Case summaries on such topics as damages/immunity, residence, priorities, and timelines for service are included in the extensive appendixes along with federal statutes and regulations concerning handicapped children.

Volume II contains an appendix to a larger document on child advocacy for handicapped students needing special education. Appended material includes regulations for Section 504 of the Rehabilitation Act of 1973, the Buckley Amendment, and the Developmental Disabilities Act. Also found in this volume are policy interpretations by the U.S. Departments of Education and of Health, Education and Welfare of individualized education programs, clean intermittent catheterization, use of insurance proceeds, program accessibility, participation in contact sports, and school board members as hearing officers. Guidelines from the U.S. Office for Civil Rights are appended for eliminating discrimination and denial of services on the basis of handicap.

Updated Directory Lists Facilities and Services for the Learning Disabled

The tenth edition (1983–84) of the *Directory of Facilities and Services for the Learning Disabled* is a comprehensive reference source of LD facilities in North America. Published by Academic Therapy Publications, the directory lists almost 500 private centers, day and residential schools, counseling and diagnostic centers, remedial therapists, vision specialists and other medical and educational facilities throughout the United States and Canada. Each listing provides information such as age and grade level of students, types of services, length of school year, and fee structure. The directory has information on current testing materials, and a list of sources that offer free catalogs of materials for the learning disabled. Academic Therapy Publications, Dept. CPK, 20 Commercial Blvd., Novato CA 94947. Single copies: free ($1.

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postage/handling). Multiple copies: 2–4, $1.50; 5–19, $2; 20–49, $3.50; 50 or more, $6.50. Postage and handling charges extra for all multiple quantities.

Computer Search Reprints

You can save on popular computer search topics if a reprint is available (especially if you're a CEC member entitled to the 15% discount on reprints).

Computer search reprints are bibliographies with abstracts from both the Exceptional Child Education Resources (ECER) and ERIC databases. Topics that continue to be popular are updated twice a year.

Order from: CEC Publication Sales, 1920 Association Drive, Reston VA 22091-1589. Orders from individuals must be prepaid. CEC members should indicate member I.D. number to qualify for discount. Credit orders accepted only when accompanied by a valid purchase order or voucher number. Prices: $10.00 each; $8.50 to CEC members (except No. 516).

501 Programs for Preschool Gifted Children (90 abstracts)
502 Gifted Elementary School Students: Programs and Curriculum Guides (100 abstracts)
503 Gifted Adolescents: Programs and Curriculum Guides (100 abstracts)
505 Educating Emotionally Disturbed Children and Adolescents in Public Schools (90 abstracts)
506 Computer Assisted Instruction for Handicapped Children and Youth (100 abstracts)
507 Learning Disabled Adolescents: Programs, Curriculum, Teaching Methods (100 abstracts)
508 Training Regular Class Teachers for Mainstreaming: Inservice Education and Workshops (100 abstracts)
509 Use of Computers in Regular and Special Education Teacher Education (100 abstracts)
516 Education of Exceptional Bilingual Students (170 abstracts) $15.00; CEC Member Price: $12.75
517 Education of Exceptional Black Students (50 abstracts)
518 Learning Disabled College Students (50 abstracts)
519 Gifted Handicapped Students (60 abstracts)
520 Gifted Underachievers (60 abstracts)
521 Research on the Effectiveness of Mainstreaming (100 abstracts)
522 Research on the Effectiveness of Early Childhood Education for Handicapped Children (60 abstracts)
523 Considerations in the Effective Use of Resource Teachers and Resource Room Programs (60 abstracts)
524 Administration of Special Education Programs in Public Schools (70 abstracts)
525 Learning Disabled Elementary School Students: Programs, Curriculum Guides, Teaching Method (100 abstracts)
526 Educating Homebound and Hospitalized Children (60 abstracts)
527 Severely Handicapped Students: Curriculum Guides and Teaching Methods (80 abstracts)
528 Computers and Gifted Students (50 abstracts)
529 Evaluation of Special Education Programs (50 abstracts)
530 Developing Social Skills in Mildly Handicapped Students (50 abstracts)
531 Gifted Minority Students: Identification and Programs (50 abstracts)
532 Computer Managed Instruction for Handicapped Students (50 abstracts)

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NEW

ACADEMIC AND DEVELOPMENTAL LEARNING DISABILITIES

Samuel A. Kirk and James C. Chalfant
University of Arizona

This brightly written and readable book brings together academic and developmental learning disabilities in a way that engages the reader and appeals to students. It covers the developmental learning disabilities of attention, memory, perception, thinking, and oral language. And it addresses the academic learning disabilities of reading, handwriting, spelling and written expression, and arithmetic.

Each chapter includes informal diagnosis and procedures for remediation. Readers will appreciate the emphasis placed on observation and informal assessment without reliance solely on formal testing.

Kirk and Chalfant have unparalleled experience in the field. No other combination is as well qualified to create a book of this nature. This timely new text has personality and will be a classic in learning disabilities.

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